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Original

EMBARRASSED RESPIRATION.

BY LOUIS LEWIS, M. D., PHILADELPHIA.

Abnormal breathing is experienced in a number of general morbid conditions, besides those in which the respiratory organs are directly concerned. It is a common symptom, ranging in degree from slight embarrassment to acute dyspnoea; and it is usually amenable to treatment directed to its cause. But it often defies control, or develops into the more intractable form of orthopnoea, when respiration can only be maintained in the sitting posture. These conditions call for urgent relief, independently of the disease with which we have to contend.

Embarrassed respiration may have its origin in the head, neck, chest or abdomen. Commencing from above, it is present in many cerebral affections, as in meningitis, epilepsy, apoplexy, concussion, compression, and sunstroke; and, above the level of the axis all lesions of the medulla oblongata inhibit the pneumogastric nerves, and so arrest the breathing altogether.

In the neck, dyspnoea results from external violence in the vertebrae Here the spinal cord is most exposed to danger from without, as an open space remains between the neural arches of the adjoining bones; and in addition, there is unusual looseness of the vertebral articulations, thus favoring the chances of displacement. Dyspnoea follows all injuries of the cord above the third vertebra, such as wounds, compression, tumors, sclerosis and caries; and it is always symptomatic of dislocations, and of all fractures that implicate the cord in this vicinity. Opposite the axis, it arises from any irritation of the phrenic nerves, which would impede the movements of the diaphragm, or from interference with the respiratory branches of the par vagum. Wounds of the phrenic nerves are more dangerous here than in the inferior cervical region, though dyspnoea may accure from injuries below the level of the axis, where the middle expansion of the cord. Yet even if the cord be entirely divided below this, motion and sensibility will be arrested, but the breathing will continue for a time. Lesions or disease of the cervical sympathetic nerves or their ganglia also affect the respiration, and may excite bronchitis, pleurisy or pneumonia.

Inside the neck, any mechanical obstruction in the pharynx, such as foreign bodies and adenoid growths, pharyngitis, tonsillitis, and retro-pharyngeal abscess, may cause dyspnoea. It may originate in the larynx, from scalds, croup and laryngismus; oedema and spasm of the glottis; fibrous, cystic and papillomatous growths; and syphilitic, tuberculous and malignant diseases. Or it may be excited in the trachea, by accidental obstructions, inflammation, and by the pressure of a bronchocele from without, or other tumors within.

Outside the chest cavity, dyspnoea attends fractures of the sternum,ribs, and dorsal vertebrae, from external violence; wasting of the muscles and soft structures, as in phthisis; softening of the ribs, as in rachitis; rigidity of the ribs and sternum, through excessive deposit of lime; softening of their cartilages, through the want of it, and tonic spasm of the diaphragm and intercostal muscles, as in tetanus.

Inside the chest cavity, dyspnoea is associated with all diseases that involve the normal functions of the lungs, as "winter cough," bronchial asthma, and capillary bronchitis; pleurisy, pleurodynia, pneumonia, phthisis, acute tuberculosis, pulmonary collapse, oedema, embolism, cancer and apoplexy; effusions of fluid or air, as in emphysema, empyema, hydro-thorax, and pneumo-thorax; mediastinal tumors; and all cardiac affections that impede the oxygenation of the blood, as cyanosis, aortic aneurism, valvular diseases, and inflammation, hypertrophy and atrophy of the heart. (Pleurisy is sometimes co-existent with herpes zoster, thus even the latter disease may be characterized by dyspnoea.)

Between the chest and abdomen, any hinderance to the free action of the diaphragm promotes dysynoea, as inflammation, diaphragmatic asthma and paralysis. In the abdomen proper, respiration is obstructed whenever the stomach is distended by food or flatus; it is a prominent symptom of ascites, peritonitis, pressure of ovarian or other tumors, wounds of the intestine, and gravid uterus; and the breathing may be seriously inconvenienced in hepatitis, splenitis, and other disorders of the liver and spleen, owing to their close attachments to and intimate relations with the diaphragm.

Dyspnoea is more or less manifest in general diseases, as in hysteria, anemia, leucocythemia, oxaluria, pyemia, cholemia, Hodgkin's disease, albuminuria, diabetes and malignant scarlatina.

There is a striking similarity between the dyspnoea attendant on some morbid states and that which is incidental to poisoning by certain drugs and noxious vapors. In epilepsy, apoplexy, meningitis, uremia, coma and trance, it is stertorous; and it is of the same character in poisoning by alcohol, tobacco, opium, morphia, chloral, turpentine, benzine, and (after some delay) by nitro-benzine. In bronchial asthma, whooping-cough, emphysema, rabies, and trismus, it is paroxysmal and spasmodic; just such as occurs in poisoning by oxalic acid, prussic acid, cyanides, cocaine, gelsemium, and nitrate of silver. In the trismus of infants, the resemblance to strychnia poisoning may be further marked by the addition of opisthotonos. In syncope, shock, typhus fever, anasarca and cholera, it is tardy and laborious; as is usually observed in poisoning by lead and tartar emetic. In concussion of the brain it is shallow and feeble, like the results of poisoning by aconite. And in fatty heart, tubercular meningitis, and uremia, the breathing often has a gradually ascending rythm, followed by a prolonged pause, and then a fluttering fall ("Cheyne-Stokes Respiration"), similar to the breathing after a poisonous dose of iodoform. This form of dyspnoea is nearly always fatal.

In croup and laryngismus, the breathing is grating and stridulous; in actute laryngitis, shrill and whistling; in capillary bronchitis, accelerated and continuous; in pleurisy and broken ribs, "catchy" and intermittent; in diphtheria, delayed and distressing with distension of the alae-nasi. In asthma, dependent on Bright's disease and other renal disorders, it is violent, and very apt to

be fatal; in lightning stroke and other electric shocks, it is deep and interrupted (though in fatal cases death is due to failure of the heart). In sunstroke and cerebral affections, it is moaning; in valvular disease and dilatation of the heart, sighing and gasping, but without stridor. In infantile disorders, a slow intermittent dyspnoea with long pauses suggests brain affections; when hurried and intermittent, capillary bronchitis is indicated; and, when it is rapid without intermittence, inflammation of the larynx or trachea. In peritoneal disease the breathing is mostly conducted by the muscles of the upper ribs; in pleurisy and pneumonia, by those of the abdomen.

Dyspnoea always occurs when there is insufficient oxygen in the blood, which leaves it too venous; when there is excess of carbonic acid (which is only poisonous by its preponderance over the oxygen), and when carbonic oxide is present, which (besides being highly poisonous in itself), combines with the hemo-globin of the red corpuscles, and hinders their work as oxygen-carriers. Sulphuretted hydrogen likewise robs the hemo-globin of its oxygen. The inhalation of coal gas, marsh gas, fire damp, and methane, and the vapor from charcoal, lime kilns, brick kilns, and brewing vats, produce these effects; but persistent artificial respiration may resuscitate the victim, by eliminating the surplus carbon, and restoring the missing oxygen. 2011 Arch street.

A PRACTICAL STUDY OF THE BLOOD AND THE CIRCULATION, WITH A HISTORICAL REVIEW OF THE SUBJECT AND ITS BRIEF CONSIDERATION FROM THE STANDPOINT OF ITS CHEMICAL COMPOSITION, ANATOMICAL STRUCTURE, AND PHYSIOLOGY; INCLUDING CLINICAL STUDIES, AND EXPERIMENTAL RESEARCH ON THE LOWER ANIMAL.

BY THOMAS H. MANLEY, M. D., NEW YORK.

Continued from last number.

PART XVIII.

THE COLORLESS BLOOD CORPUSCLE.

A fierce contest has been waged on the role of the leucocyte, in that deranged state of the system known as inflammation.

What purpose it serves under normal conditions is certainly doubtful, though in diseased conditions many claim for it important functions, which, indeed, must be conceded if it be admitted that the leucocyte and pus-corpuscle are identical.

Proof of this must be definitely established as a preliminary requisite, though with those acknowledged as distinguished authorities on cellular pathology a wide diversity of opinion exists. The morphological characters of these two bodies are not so similar as to be readily confounded. The pus-corpuscle is more highly refractive, it is much larger, its centre is crowded with living matter, of a deep yellow color in most instances. Its protoplasm is finely granular, and its nucleus is indistinctly defined. If all pus corpuscles were phagocytes we should in all cases of acute, specific or other forms of suppuration, find them, under the microscope, in their natural state, or stained, packed with the various bacteria, but, as a matter of fact, this we never see as a constant occurrence, except with the

diplococcus of gonnorrhea, which is a feature, said by Niesser, to be its "invariable characteristic."

But the pus corpuscle possesses moderate ameboid movements when promptly examined in a warm medium, before it has parted with its vitality. It undergoes various changes in outline before its marginal, elastic layer loses its contractility, when, finally, as the defunct state sets in, the palsied walls of the leucocyte widely expand and it assumes a globular or nearly circular outline.

Now, if we send a feeble current of electricity through a fresh layer of pus corpuscules, their ameboid movements are momentarily increased, but if we delay until they all have assumed the circular form, no such movements can be provoked by the galvanic current. We fail to produce the same phenomenon or anything similar if we substitute red-blood corpuscles unless great caution is observed not to unduly expose or crush them. The liquor-puris is of a greater density than the plasma, or any medium employed for the microscopical study of the blood, and therefore the pus corpuscle thus shielded from undue pressure, and less vulnerable than the blood-disc, preserves its vitality longer, and in consequence we may note over a longer period those motions in its contour which are probably the death struggle of these bodies.

In the consideration of this question it seems to have been lost from sight that all living matter is endowed with contractile properties. The protoplasm of a corpuscle, a cell, or whatever else it may be designated, is its vitalizing element; but there are only a very few bodies that can be isolated in the living state, as it with protoplasmic bodies only found in the fluids of the body is this possible.

In life the study of the so-called fixed cells (the connective tissue muscle, the epithelia, if we except the ciliated in the oyster) it is quite impossible. The ameboid movement of the leucocyte may be observed in the living vessel, although it may be noted in a limited degree in all the corpuscular elements of the blood. The change of outline which we observe in the freshly withdrawn pus-corpuscle, however, is entirely unlike it, and undoubtedly is nothing more than a mutation of life to death, the least visible evidence of vitality being before the work of decomposition begins.

In a preceding chapter it was noted that under the eye in the living vessel one could clearly see, especially in the vascular stroma of the pulmonary organs, the red-blood globules leave the lumen of the vessel, as well as the colorless, only in less numbers. Rollet, Klebs, Beale and Bastian attribute to the red corpuscle decided ameboid movements. Cohenheim and Donders believed that the red and white blood corpuscles left the vessel in response to different forces; the one inherent and the other extrinsic. They taught that the leucocyte left the bore of the vessel, through its own ameboid movement, becoming first fast to the walls, and that escape of the red-blood corpuscles succeeded only as a result of pressure of the blood current, as when the veins are engorged by obstruction. They regarded their exit as a simple filtration of a colloid substance, but it certainly is something more than this, or rather a living phenomenon, than a mechanical process, except when a part is the seat of impending mortification, as a limb, when all the elements of the blood leave their dead vessels and blend with all the adjacent tissues.

The cornea has been the battle-ground of investigators in deciding the role of the leucocyte in pathologic processes. This convex disc of hyaline tissue, being perfectly transparent and devoid of blood vessels, furnishes a suitable territory for observations. How could a part inflame or provide a theatre for blood changes which had no blood vessels? This will be a topic for later consideration; it is enough now to simply observe the fact, that, when the cornea does inflame all the corpuscular elements of the blood are found to be there. It has been affirmed that the leucocyte, at the first onset of in-

flammation here, leaves the neighboring vessel on the periphery, to do battle with the germs of invasion. But what becomes of them in the event of sudden subsidence of inflammation, when their evolution into pus-globules is arrested? Wagner tells us that they make their way into the lymph current and by this route re-enter the blood vessels.

Now this is entirely problematical and not proven.

If infective elements were thus thrown into the general blood current they would be caught in the fine pulmonary capillaries, and form the nuclei of infurtious.

The normal cornea has no vessels of sufficient calibre to convey blood corpuscles.

If it had, perfect vision would be impossible, but it has plasmic tracts, conveying the filtered plasma for the nutrition and vitality of this highly organized structure. On irritation the canaliculi in the areas involved undergo enlargement, in order to permit the advent of that process so indespensable for the repair of tissue and re-establishment of function. It is highly probable too, that according to the older view, at the seat of the inflammation, some of the nuclei are provided, which later mature as pus-corpuscles.

This latter theory received strong support by experiment on other non-vascular parts, through which it has been shown that in inflammation not only the migratory connective tissue corpuscles can become pus-globules, but also that fixed cells may become completely migratory and take on purulent changes. According to Strickler pus-corpuscles arise in various epithelia, partly by division and partly by endogenous formation, form connective tissue corpuscles and from muscle cells, etc.

Ranvier taught that the lining pavement epithelia of serous membranes, the blood vessels and lymphatics, the alveoli of the lungs, the glomeruli of the kidney, as well as the flat cells of connective tissue, under the influence of inflammation, return to their embryonic state. This is essentially Dr. C. Heitzman's view on the genesis of the pus-corpuscle. According to Koster the pigmented cells during inflammation of the lungs become migratory and appear within the alveoli.

From the foregoing discordant views among eminent observers it may be concluded that the leucocyte with other protoplasmic elements in some manner are actively concerned in local inflammatory states, its role, however, being rather a subsidiary one.

As to its being a phagocytic agent of great activity, there is much reason to doubt. That it engulfs bacteria or will gather up from the circulation particles of cinnabar, is no proof that it is a germicide.

The plasmodia of laveran are found imbedded in the fine reticulum of the red corpuscle, in malaria; besides, we know that the connective tissue corpuscle, equally with the leucocyte will encapsulate cinnabar; and if the pus-corpuscle was regarded as a lineal descendant or transformed leucocyte, we have abundant proof that the gonococcus preserves all its activity within its protoplasmic zone.

This I have noticed several times when gonorrheal pus has been praru stained, without passing the cover-glass through the flame. Movements of the germ were distinctly seen within the corpuscle.

The general characters of the leucocyte widely vary in different specimens of blood. In order to fully appreciate this distinction various conditions are necessary in preparing and mounting specimens. Painstaking and preserving effort must be made, under a good light and a clear lens; moreover, it has been my experience that their behavior varies in the blood of different individuals. Their activity sometimes is most extraordinary. Here and there, in a capillary fork or terminal loop, we will see one moving slowly along, while the red globules flit by, with a flash-like movement. It finally seems to creep close to the side of the vessel, halt a while, and move on again.

In other places, two or three seem, as it were, glued by their sides to the vessel by a slender attachment.

The blood current as it sweeps by communiciates to them a trembling, quivering motion. Shortly we will observe that one has changed its shape, when we will notice a spectacle, something like a boy dragging himself through a rail-fence; the leucocyte has become engaged in the wall of the vessel. One club-shaped projection has pressed out into the pericapillary space, while the remainder is yet within the vessel. Now, after a few moments, it has made its escape completely through.

When the capillary current has been artificially arrested; in various situations, where the corpuscles have been driven into a thickly packed group; now and again, we will see a violent commotion, a leucocyte will commence its antics, make furious gyrations, as though suffering from asphyxia or some irritant, keep them up for some time, unless the constriction is removed and the current again is liberated and moves on, when all this agitation among leucocytes suddenly ceases.

(To Be Continued.)

L'ONANISME CHEZ LA FEMME.

BY DR. POUILLET, FRANCE.

Translated from the sixth edition by Dr. F. E. Chandler.

(Continued from last Number).

CHAPTER III (Continued).

Third. Mechanical Physical Causes.—A. Certain prolonged exercises, such as dancing and horseback riding, may be considered as mechanical causes predisposing to manualization—dancing, by causing a congestion of the uterus; horseback riding, in addition to this, by direct shocks on the seat, upper portion of the hips and friction of the organs of generation.

Schwartz (loc. cit. p. 6) says: The trot and short gallop often cause a loss of seminal fluid in persons who are unaccustomed to horseback riding or who are of extremely sensitive temperaments. This is especially common in women (sic).

b. The sitting posture or dorsal decubitus when excessively prolonged may also cause pelvic congestion and genital irritation favorable to the genesis of masturbation.

c. Deslandes (loc. cit. p. 514) says: It is a well-known fact that domestic animals, cats or especially dogs, have, by licking the sexual parts of young children, especially of girls, aroused from its torpor a sense that should have remained unawakened.

d. We cannot stop without calling attention to the erotic influence of some trades where the corporeal forces are brought into play, among others, those where the sewing machine is used.

The shock that the oscillatory movement of the pedal imparts to the lower portion of the trunk, the rubbing movement of the labia majora on the labia minora, with the resultant warmth, frequently cause onanism.

The leucorrhea which is almost constant in these operatives, is generally the result of unnatural practices.

The sewing machine is not only a cause of masturbation, but it is also a means of it.

During a visit that I made one day to a factory of military clothing I was witness of the following scene:

In the midst of the uniform noise of some thirty sewing machines I suddenly heard one moving at an increased rate of speed. The girl operating this machine was a brunette of 18 to 20 years of age. While she automatically moved the garment she was sewing her face grew ani-

mated, her mouth partly opened, her nostrils dilated and the oscillation of her feet drove the pedals at an ever-increasing rate of speed. Soon her eyes closed convulsively, her eyebrows drooped, her face became pale, her head was thrown backwards, her hands and her limbs ceased their movement and relaxed, a stifled cry, followed by a long sigh, was lost in the noise of the workroom.

The girl remained without movement for a few seconds, then drew out her handkerchief, dried her temples, which were moist with perspiration, cast a timid, sheepish glance at her companions and recommenced her work.

With my guide, who had noticed my attention, I approached the operative, who blushed, dropped her head and stammered a few words of excuse even before her employer told her to sit back in her chair and not on the edge of it.

Just as I was leaving I again heard, but from another part of the room, a machine increase its rate of speed. My companion burst out laughing and told me that that was of so common occurrence that no one ever paid any attention to it.

B. SOCIAL CAUSES.

First. Wealth, which allows a sedentary and inactive life; which permits rest in feather beds in the warm atmosphere of a perfumed bed-chamber, and which furnishes an excess of succulent nourishment, frequently causes culpable practices by leaving women entirely to the play of their imaginations. Therefore, genital vice is met with oftener in cities than in the country, where hard work in the fields and in the open air consume more largely the forces of the worker.

If, nevertheless, it is just as common in the home of the poor as in the rich man's dwelling, it does not invalidate what I said above, for there are other forces which urge the poor girl in the same direction as her richer sisters.

Second. As a matter of fact, in the poorer classes it is the promiscuousness of the sexes and the too intimate family life which cause onanism. As a child, the poor man's daughter runs about in the streets with boys of her own age or else is given to the care of some old woman, who pretends to take care of her for a few cents a week. If in either of these cases she has no opportunity of indulging her native and unhealthy curiosity she may be considered lucky!

When a half-grown girl she enters some workshop or factory; once there, equivocal stories, gestures and obscene words soon put her on the track. When, evenings, she returns to the chamber where the whole family grovel; where the father, more or less intoxicated, more or less besotten, does not have the least shame in giving himself up to his lascivious instincts before his children; where her brothers rub against her, often in the same bed, then she understands, and if a remnant of modesty makes her refuse the propositions of her companions or of the first-comer she no longer refuses herself that enjoyment which, under happier circumstances, she might still have been ignorant of.

C. INTELLECTUAL AND MORAL CAUSES.

Besides, the too assiduous cultivation of the fine arts, the study of tender and melodious music, the drawing of male forms and the constant company of young men, all of which are predisposing causes of manualization, are the following occasional ones:

a. The sight of lascivious pictures, such as the transparent playing cards made in Germany and Belgium, and the microscopic photographs which were so common a few years ago.

b. The sight of statues in voluptuous and impudic poses, as well as pictures of nudities.

c. Obscene conversations and gestures which awaken a fatal curiosity. The copulation of domestic animals.

d. Reading novels or books which over-excite the imagination cause lewd thoughts and hasten actively the corruption and depravation of morals. A. Schwartz (loc. cit. p. 8)

says: "How many young people of both sexes have been made slaves to onanism through novel reading."

e. Certain plays act in a more marked manner, although in one less generally known. After leaving the theatre and going to their rooms, under the influence of the drama they have seen played, the young girls commence to dream of like events happening, in which they play the part of the heroine; they love and are loved by a being whom they create, according to their fantasy. Following up their dream step by step, they imagine themselves married, after a thousand difficulties, to the object of their adoration, and insensibly give themselves up to some culpable maneuver.

f. Bad example, always contagious, has a prominent place among the moral causes. In schools, true hotbeds of infection, it is in company with their classmates that they commit their first fault which is later on followed by many others.

A culpable negligence in young ladies' boarding schools allows masturbation to be introduced there only too often. This practice, hidden from the impenetrant or blinded eyes of the teachers under the veil of friendship, may be carried to a scandalous extent.II The most intimate relations are formed under this specious pretext; one bed suffices for the two friends, and by unheard-of refinement young girls have been known to tear the thin epidermis which covers their lips in order to give each other bloody kisses so as to better prove their devouring love and fidelity.I

I cannot refrain from reproducing here a citation taken from Mereville de Pousan: III.

"Among the Francs, our ancestors, the height of education was to prevent the too free communication of the sexes, and not over two centuries ago it was thought to be the best possible proof of good breeding when a young and virtuous girl was married to a strong and handsome youth.

"We have refined these customs somewhat, and I would not dare decide if in our modern marriages this last condition is now as possible of fulfillment as formerly, for our morals are so corrupt that it is no longer the men who are the most dangerous to the young girls." * * * "Who now could look askance at the sweet kisses of a sister or at the caresses of a lady friend?"

"Flee, young maiden, this poisoned breath, misguided by an error of nature, a fatal resemblance, an ardent imagination, Zulmis while covering thee with kisses imagined she is embracing her lover. * * * It is Sappho, thinking to grasp Paon in every object she meets. * * * Take care, this new delirium leads further than you think." * * * "But no; she has not even this criminal excuse. * * * Man, she would love you less and convinced of your sex she adores you more, etc."

"It is too late. Carried away by her confidence in the same sex, by the troubles of her senses, her youthful inexperience and her curiosity, she has nothing left for her husband; freshness, innocence, she has lost all, and the flower has faded on the stem. Finally, she, in her turn, goes to seek victims among her companion novices, and these soon prelude with solitary amusements these ridiculous combats."

"In vain nature rebels against the precocious pleasures and punishes by a painful existence the infraction of the first of her laws; nothing will bring them back to the path from which they have erred * * *."

Besides all this, there are the tutors and the servants, both male and female, who, trampling under foot their moral obligations, teach the most shameful practices to those entrusted to their charge. I could, if necessary, quote any number of facts from different authors—Tissot, Salzmann, Rast fils, Boerner, etc.; but I shall only mention the following case, which seems to me to be especially interesting. At Strasburg a certain tutor once abused most shamefully the confidence placed in

I. Dictionnaaire des Sciences Medicales, Vol. XXXI.

II. Deux Amies, chapter I.

III. Historic Philosophique et Medicale de la Femme, etc., pages 62-63, Vol. II.

him. He had been engaged to give instruction to two little girls, and one day the elder of these surprised her mother by being unwilling to go to her lesson. The child hesitated when her mother inquired the reason, but finally told her all that the tutor had done to her. The mother, indignant, persuaded her daughter to go to him for one last lesson, watched the wretch and caught him in the act. I.

Finally, is it not of common occurence to have nurse girls and even, sometimes, the mothers themselves, carry their stupidity so far as to handle the genitals of their nurslings to quiet their cries and calm their tears?

In the article already quoted from, the Journal des Sages Femmes, it is said that very young children do not always contract habits of masturbation by themselves. Often, too often, they owe it to the unqualifiable initiative and intervention of some other person. The part played here by the nurse is only too well known; but it is rare, I believe and hope, to meet facts like the following, which were told me by my fath-

In a house where he was family physician was a little boy 15 months old who was nursed by a woman that had an insufficient supply of milk. Therefore, to calm the unappeased appetite and the tears of the little fellow, as well as to keep her place, she would, during the night "pratiquer la succion des parties genitals" of her suckling.

Horrible as this is, the following is more so. A little girl 5 years of age, having contracted habits of masturbation, gave herself up to it with a veritable frenzy day and night. Her mother had not been able to imagine any better way of preventing her daughter giving way to this habit so frequently than to promise that if she would give it up during the day she herself would intervene at bedtime, and she kept her promise, for she did not hesitate to realize it once before one of her friends who chanced to be present when the child was being put to bed. All that we can say in regard to this case is that the mother was hysterical.

g. In some married women a frustrated project of alliance and the consequent hate they feel for their husband are also determinant causes of onanism. Forced to suffer the embraces of a man she despises or detests, the wife submits in silence but with repugnance, thinking meanwhile of him whom she would like to have near her and whom she loves secretly. Then, gradually, under the influence of these ideas, she substitutes in imagination her lover for her husband, thus committing a kind of moral infidelity. So far there is nothing to criticise, but later, when alone, she has the same dream once more and replaces the absent lover by licentious practices.

D. MIXED CAUSES.

These are, like many of those preceding, much more common than is generally supposed. Any and everything that prevents the woman from enjoying what nature intended for her may be grouped under this head.

The principal causes are: a. The impotence or indifference of her husband through coldness, age, etc.; b. Want of harmony between the copulative organs of the two sexes; c. Tardiness of the venereal spasm in some women; d. The wish of the male to see the pleasure he has, shared by his companion; e. Widowhood, or the long absence of the husband or lover; f. Want of comeliness or physical infirmities of the woman.

a. That impotence and indifference of the husband toward his wife will predispose her to masturbation, especially if she is young and passionate, cannot be doubted.

Is it not this involuntary abstinence which makes of the inmates of Oriental and Indian harems so many onanists, whose imagination, overexcited in every manner, is in constant pursuit of new methods of calming their erotic, forcibly-restrained passions?

When lasciviousness is joined to impotence in the husband the cause becomes still more active. Here is an example: A lyric artiste, very

I. Schwartz loc. cit. p 9

much alarmed to find her voice losing its power and clearness, consulted us on the subject. Questioning her brought out the fact that she was married to a man much older than herself, and who had become impotent as the result of a hemiplegia. The husband, in spite of his infirmity, tried frequently to accomplish his conjugal duties, but with out other result than that of irritating his young and passionate spouse. Often after vain attempts at connection he gave himself up to "des caresses linguales" with his wife, intending not to balk her of a pleasure she most ardently desired. These attempts were unsuccessful and threw the singer into such a state of erotic enervation that she was obliged to calm herself by digital manipulations during her husband's sleep. It was from the time that she commenced these maneuvers that she noticed her vocal troubles.

b. If the male organ is smaller than normal, or, although normal, is in disproportion with the female organ; if the clitoris is too small or by a relatively common malformation, placed too high; in spite of the turgesence which in the erethism carries it downwards toward the penis, it cannot get a sufficient quantity of friction to bring about the voluptuous spasm. The woman in this case, usually well aware of the state of things, often tries to complete the operation herself or even asks her husband, lover or some mercenary of either sex, to bring about the venereal orgasm in her.

In support of this statement here is what I find in Roubaud: *

"A woman was so passionate that, not being able to satisfy her desires with her husband (she was obese), she paid a third person to commit masturbation on her in spite of the principles and precepts of religion and honesty with which she had been surrounded from her youth.

"Often, after the marriage has lasted a certain time, when the first passion has calmed, the man, who wants pleasure, has no longer the desired sensations in sexual congress, the excitement being wanting. He then tries to awaken the dying flame by making his companion take lascivious poses, those powerful aphrodisiacs for beings who have gone through the whole list of ordinary and unnatural pleasures. Then connection is had a retro, modo ferarum or else ab ore. In these cases the erethism of the woman is insufficient to cause the venereal spasm, but is powerful enough to counsel manualization.

A woman of Luxemburg, aged 24 years, married to an ex-soldier of the African Legion, came to consult me for a relaxation of the sphincter ani. She was likewise troubled with general agitation and visual hallucinations that frightened her. She confessed, weeping, but not without reticence, although the proofs of passive sodomy were flagrant, that shortly after her marriage, three years since, her husband had commenced to have buccal and especially rectal connection with her.

Excited in the highest degree but unsatisfied by these disgusting procedures, whose frequency kept her in a constant state of erethism, she had given herself up several times daily to solitary maneuvers in the hope of calming her desires, but had only succeeded in exciting them still more.

c. We have seen above that the male often terminates copulation before the female; it follows naturally that the latter, because of this slowness which only permits her to have a commencement of pleasure, tires in the long run of an act that is more disagreeable than otherwise, and gives herself up to unnatural practices which will permit her to consummate a pleasure that coitus only taught her to have a presentiment of.

d. There is in the husband or lover an innate desire—and I think no one will gainsay it—to see the voluptuous sensation that he enjoys shared by his companion. If the woman is naturally cold but clever she simulates an enjoyment she does not feel; an adroit and intelligent manner of attaching her consort to her.

All women, however, do not act thus. Some of warm temperament and lively imagination are apathet-

ic in coitus, and after it indicate by caressing words or expressive gestures to their husband or lover another means of helping them arrive at the desired goal. Nevertheless, this is always an illicit maneuver.

On the other hand, it must be acknowledged that the men are far from being strangers to genesis of the taste for manualization in women. They may say their mea culpa.

When a young man tries to obtain the favors of a woman, to whatever class she may belong, after the presents, the amorous words, even alcoholic excitement, after kisses of all kinds to bring the erotic erethism of his companion up to the level of his own and to arrive at his goal he does not hesitate, as soon as he deems the moment propitious, to slip his hand under the feminine garments and maneuver there until the woman abandons herself wholly to him.

Here is something so odd as to be worthy of mention that happens frequently in the villages of Pas de Calais and possibly elsewhere. Whenever there is a marriage between country people of the lower classes the wedding guests after the dinner and before the ball pair off and go, six or seven couples together, into a room, and there, after a few doubtful jokes and stories, the shutters are closed and the curtains drawn. Now the young men take their partners upon their knees, and the girls, who for a fortune would not yield themselves to their lovers, allow themselves, so elastic is their modesty, to be "manualized" with pleasure.

e. In the world may be found women whose passionate desires have been calmed by marriage. Death deprives them, while still young, of their husbands. Social reasons, one or several children, prevent them from forming a new alliance. Religious scruples or the fear of pregnancy keep them from taking a lover; nevertheless, their desires increase in proportion to the time they are unsatisfied.

How to act in this case? How quench their thirst for pleasure? There is but one way, for the consequences of which, as Juvenal says, "abortivo non est opus!"

What I have said of widowhood is equally true of that temporary widowhood that the husband's journeys may cause in some households. In 1871, while at Lille, I had to attend a woman of 22 years whose case was as follows: She had a rebellious leucorrhea. Not being able to assign with certainty any cause for this trouble in a person of her constitution I suspected onanism. After a few denials this lady acknowledged that her lover made trips of several months' duration and that during this time she was tortured with irresistible desires.

She calmed these by clitoridian titillations. "I have," said she, "in the first place, a great deal of affection for my lover, and, besides, I do not dare give myself to another man during his absence for fear of pregnancy; therefore, this way only remains."

f. We frequently find unfortunate women endowed by nature with a repulsive deformity or hideous infirmities. For them are no liaisons, no marriage, no love, no men; nevertheless they have a heart like other persons of their sex; they have an innate need of affection and senses to be satisfied. Everybody repels and makes a jest of them. What is the consequence? They become almost fatally the victims of solitary libertinage.

I shall terminate this long enumeration of the causes of onanism with a few words on its religious etiology.

E. RELIGIOUS CAUSES.

It is not my place to judge religion; nevertheless, it is evident to most people that a certain portion of the culte, confession, is a very arduous thing and one which demands a tact of unheard-of delicacy on the part of its ministers.

The trappist father Debreyne, author of "Moechiologie," says himself that "too great curiosity on the part of the confessor is capable of ruining young people of either sex. We have seen those who, after having

been imprudently questioned on the sixth commandment, have tried to do what their confessor had imprudently taught them by his indiscretion."

It is certain for us that the confessor exceeds his rights when he questions his penitente "de actu conjugali, de situ, de osculis more columbino, de amplexibus, de tactibus impudicis," when he asks her if "in copula erat succuba vel incuba" or forces her to recall if ever her husband "semen emiserit extra vas."

The penitential interrogations are untimely when addressed to a girl or woman. They are the following: *

"Fecisti quod quaedam mulieres facere solent, quoddam molimen aut machinamentum in modum virilis membri, ad mensuram tuae voluptatis, et illud loco verendorum tuorum aut alterius cum aliquibus ligaturis ut fornicationem faceres cum aliis mulieribus, vel alia eodem instrumento sive alio tecum? * * *

"Fecisti quod quaedam mulieres facere solent, quando libidinem se limine vel alio aliquo machinamento tu ipsa in te solam faceres fornicationem?

"Fecisti quod quaedam mulieres facere solent, quondo libidinem se vexantem extinguere volunt, quae se conjungunt quasi coire debeant et possint, et conjungunt invicem puerperia sua et sic confricando pruritum illorum extinguere desiderant? * *

"Fecisti quod quaedam mulieres facere solent, ut succumberes aliquo jumento et illud jumentum provocares ad coitum qualicumque posses ingenio ut sic coiret tecum? * * *

"Fecisti quod quaedam mulieres facere solent, ut cum filio tuo parvulo fornicationem faceres, ita dico ut tuum filium supra, turpitudinem tuam poneres ut sic imitateris fornicationem?"

Although the author from whom I have taken these extracts affirms that it is the method of confession laid down in all the books of "Theologie Erotique," I think for the honor of the clergy that these precepts have fallen into disuse.

What reforms in religious matters are necessary is not for me to say. I can but repeat with the author of the "Maudit:"

"Guidance, mystic readings, books of piety composed for young people, where in trying to teach them to be chaste they are shown how one is not, constitute a veritable moral rape."

* Le Confesseur, vol. ii, chap. v.

(To be Continued.)

Editorial

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THE RELATIONSHIP BETWEEN THE MEDICAL JOURNAL, THE ADVERTISER, AND THE GENERAL PRACTITIONER.

There are few, who read the pages of a medical journal, who stop to think of its important bearing on the education of the profession through the influence of its advertising pages. A journal of this nature is considered a scientific production, which, indeed, it should be, but how little one thinks that its relation to scientific education is not confined to its reading pages, so termed.

The medical profession is peculiarly susceptible to new ideas. Individually, the practicing physician relies on the periodicals he has selected to adorn his office table and library to augment his store of knowledge and supply him with those new ideas. He is perfectly justified in expecting this, and it is the aim of most journals of any worth to supply them.

Most of the profession well know that the vast amount of current literature cannot be incorporated between the covers of any one periodical; hence, it subscribes for more than one, and, hence, the excuse for the existence of the hundreds of medical journals throughout the country, many of which are no more than catch-penny advertising schemes, relying on an over-rated circulation to make money, or disseminated about in the interest of some medical school or manufacturing chemist.

It is doubtful if there exists today, in this country at least, a medical journal of scientific worth but must of financial necessity admit to its advertising pages much that is unscientific and undesirable. We believe this is even true of those journals that are continually crying "ethics in journalism," unless they are conducted at a loss for the purpose of advertising some school, or other object, in the interest of the parties who run them; a glance at their pages readily reveals the true object of their existence. But business is business, and the journal of the present day that is run on sentiment or idealism soon comes to financial grief; the profession recognize it—when it is gone—but they do not accord it their support because the price comes too high.

This is a time when everyone looks out for himself; physicians and all. The doctor is called to his patient as a matter of business, because he is supposed to know more

about diseases than the friends of the sick. Uneducated advice, like newspaper medicine, often causes disaster to the patient. The physician should have that knowledge and foresight necessary to bring to a successful issue the case in hand, if such be possible. In short, that is what he is employed for. Suppose the case be peculiar. The physician will consult his constant advisers, which are his library and medical journals. In one or more of the latter he sees the advertisement of some manufactured product which is peculiarly adaptable to the case in hand. He tries it and he meets with success. Naturally he inquires further into the nature of the product, communicating directly with the advertiser. If the manufacturer imparts sufficient knowledge of his product, so that the physician can intelligently use it, he has benefited both physician and medical journal in a practical manner, besides instilling confidence in himself.

On the other hand, if the remedy fails of therapeutic action, or the manufacturer declines to enlighten the inquirer so that he can apply it intelligently, he not only injures his own cause, but that of the journal in which his advertisement appears, and he is very apt to blame the circulation of the journal, and claim that medical journal advertising brings no beneficial results at all. The physician, also, may censure his journal for thus advertising unscientific products.

Now, it is not always apparent to those journals that strive to weed out injurious advertising whether a product is good or an advertiser aims at scientific advancement. Certain houses have always been recognized as reliable and devoted to the best interests of the profession. Some of them advertise in medical journals and some do not. Although deprecating the condition which leads the non-advertisers to adopt a different policy than that tending to elevate medical science, we will later give some reasons why they follow such course.

That good medical journals must live or the profession would lack general progress is self-evident. In the same sense must the manufacturing chemist sell his products or he cannot live by advancing therapeutical measures. The physician must have both or he cannot keep abreast of his professional brethren in all that pertains to the scientific management of his cases. The three are in pursuit of similar ends; first, personal support through the almighty dollar, under the cognmen of "business," and, second, the advancement of professional attainments of practical and scientific value. The three are one in the ultimate designs for which each contributes his part.

The advertising of medicinal or secret remedies, in the daily press, is to be deprecated by the profession, not only as harmful to its business interests, but to the health of the public as well. Uneducated persons are not adequate advisers as to whether an invalid needs a tonic or a depletive, a stimulant or a sedative, or whether a crying infant needs soothing syrup or its mother's breast. Neither can a newspaper undertake to prescribe for one's symptoms. This sort of advertising tends to harm by attempting to teach an uneducated (medically) public, in an unscientific way. The result is, a smattering of incorrect knowledge which is worse than useless to the sufferer, but which is lent color and worth by the literary standing of the paper in which it appears. This sort of humbugging by designing advertisers should be suppressed as a menace to the public health.

At the present time the demand is for cheaper literature; that is, scientific journals at about the cost of the daily or weekly press. There are many causes which make this successful in some instances and failures in others. These causes are also closely allied to those which incite some worthy manufacturers to withdraw from advertising in medical journals. We refer to the lack of support given the manufacturer by the subscriber.

The success of a medical journal is directly dependent on two sources of income. First, that derived from a large subscription list; second, by

the support from advertisers. But third, and indirectly and as important is the support given the manufacturer by the subscriber through his medical journal. The failure in this last element of support is the keynote to the failure in establishing good scientific journalism at moderate cost to the subscriber.

Some manufacturers, (fortunately there are many exceptions) who from the worth of their products desire and are entitled to the patronage of physicians, have withdrawn their support of some of the best of our medical journals, for the very reason that attention is given to their products far more profitably through the medium of agents, who canvass among physicians, than through the medium of medical literature. Now, we all know how disagreeable it is when busy with office patients, or in a hurry to attend a call, to be interrupted by an agent, whether he has anything to sell or give away. Politeness compels us to overdo our manifestations of devotion to him while secretly we are cogitating some means of escape, or tempted to kick him out of the house. The plan may be an advantageous one to the manufacturer, and is undoubtedly an excellent addenda to a generous advertisement in our medical journals, but as physicians, we should never allow it to ruin our chances for good scientific journalism at a cheap subscription price, by neglecting our duty as indirect supporters of our favorite periodicals.

The consequence of this is that there has crept into medical journalism to-day much advertising that is unprofessional, and not strictly ethical. Failing to receive support from those quarters which tend to elevate and advance medical science, many journals are forced to take whatever comes to them, in order to sustain themselves. The same reasons apply to the forcing of worthy manufacturers from medical journal advertising into the daily press; an act fully as unprofessional and despicable, so far as the medical profession is concerned, as the first.

There is probably no city in the Union in which its local medical journals receive so little local support from the trade, both from instrument makers, medical schools and chemists, as in Philadelphia. For this reason the good name of Philadelphia as the greatest centre of medical thought and learning in America is fact becoming obsolete.

It is in the power of the subscriber to influence in a material way this order of affairs. He can repudiate the soliciting agent unless the house he represents is a liberal advertiser in the journals to which he subscribes. He can refuse to employ those products which do not come up to the standard of value claimed in the advertisement. He can protect his own interests, and those of the reputable manufacturer and journal, by refusing to prescribe such products as are advertised in the daily press, catering to the ignorance of a lay public. In short, reciprocity is the only means whereby the unit of interests between the medical journal, the advertiser, who really has the advancement of scientific medicine at heart, and the practitioner can be maintained.

DIPHTHERIA ANTITOXIN AS A CULTURE MEDIUM FOR THE DIPHTHERIA BACILLUS.

Some interesting correspondence has been published in the late numbers of the British Medical Journal relative to diphtheria antitoxin as a culture medium for the diphtheria bacillus. We are not surprised at the result of the investigations, proving that serum of any sort will prove an excellent culture medium. It would not have been along the line of sound reasoning to have had it prove otherwise.

The letters in question refer to this fact, having been brought out

by Drs. Wright and Semple, of the Netley Army Medical School, and are as follows:

"In the British Medical Journal of October 12 I was much exercised in my mind to learn that Drs. Wright and Semple, of the Netley Army Medical School, suggest the use of diphtheria antitoxin as a culture medium for the diphtheria bacillus. I have not had an opportunity of verifying their experiment; but if it is a reliable one I wish to point out that it appears to upset my view of the value of the antitoxin as an antidote to diphtheria poisoning. I have always understood, although I may be open to correction, that the antitoxin contained a something—possibly a ferment—which, when introduced into the body of a patient suffering from the disease effectually prevented the subsequent growth of the Klebs-Loeffler bacillus. If this is not so, what is the use of the injection? I am, etc., W. A. Hollis."

"In reply to the letter of Dr. W. A. Hollis, in the British Medical Journal of November 9, respecting the employment of diptheria antitoxin serum as a medium for cultivating the diphtheria bacillus, I may say that I have made trial of Drs. Wright and Semple's method with satisfactory results. Three inoculations were made as directed from membrane expelled from the trachea of a severe case of diphtheria in a boy, aged 5 years, which proved fatal on the fifth day, after tracheotomy and two antitoxin injections. At the end of twenty-four hours colonies had developed at the sites of inoculation, and these showed, on miscroscopical examination, crowds of short and long bacilli, with cocci. One little detail may be added to Drs. Wright and Semple's directions: the bottle can be kept at practically body heat during the daytime by carrying it beneath the waistcoat as they describe, but what is to be done at night? I placed the bottle in my axilla, secured by a string round the neck.

"I take it that the antitoxic serum serves in this capacity simply as a culture medium, any special properties which it possesses being destroyed by the heat applied to produce coagulation. I am, etc., H. W. Webber."

"Your correspondent, W. A. Hollis, in reality proposes to Dr. Semple and myself the following dilemma: either (1) the injections of anti-diphtheritic serum may be useless, and, if so, the antitoxic serum may be a good cultivation material for jections of anti-diphtheritic serum are useful, and then it must follow on a priori principles that the diphtheria bacillus will not grow on antitoxic serum.

"The only way of dealing with such an argument is to show that there is another possible alternative which we have no a priori reasons for rejecting. The alternative in question is that the injections of antitoxic serum may be useful, even though the antitoxic serum possesses no bactericidal power whatever. Now, since this is a proposition which probably every bacteriologist is concerned to maintain, it may be well to show that its acceptance does not involve us in any contradictions. The matter will probably become perfectly clear to the reader if he will consider and compare the two following series of propositions: (1) Alcohol is produced by the yeast plant. The absorption of that alcohol into the system constitutes an 'alcohol intoxication.' Certain drugs, such as opium or bromide of potassium, do to some extent neutralize the effects of that 'alcohol intoxication.' A sugar solution constitutes an excellent culture medium for the yeast plant. (2) Diphtheria toxin is produced by the diphtheritic bacillus. Absorption of diphtheria toxin into the system constitutes the 'diphtheria intoxication." Diphtheria antitoxins neutralize the effects of that 'diphtheria intoxication.' Serum is a good cultivation medium for the diphtheria bacillus.

"Now, we are evidently no more entitled to infer a priori from the one series of facts that the presence of 'antitoxins' in the serum would render it a bad culture medium for the diphtheria bacillus than we are entitled to infer a priori from the other series of facts, that the presence

of opium or bromide of potassium in a sugar solution would render that sugar solution a bad culture medium for the yeast plant. In both cases the question is simply a question for experiment. I am, etc., A. E. Wright."

We have always regarded the theory of antitoxin, when put in the light of a developmental result of a toxin, within the blood of the living human being, or animal, on account of the self-limitation of disease, as considerably mythological. The idea that because a disease gets well of itself, that there is developed in the blood an agent antagonistic to the poison arising from germ production must, in view, of the apparent good office of diphtheria antitoxin, so-called, be doubted.

If we watch the effect of injecting this diphtheria antitoxic serum. we will observe the rapid manner in which the false membrane leaves the inflamed and congested mucous surfaces. Such action cannot arise from the simple bactericidal or antidotal effect of the remedy, in the sense that antidotal means counteraction of direct poison. The congestion and inflammation is too early relieved to be due to anything else than a restoration of correlative circulation in the lymphatics, thus bearing away those products of disturbed circulation which go to make up the phenomenon of fibrinous inflammation.

We seem to have in the serum of certain animals that power to restore to normal tone, the blood cells, which is the first essential element in establishing correlative circulation. The obstructing agent in the lymphatics once removed, nature takes care of the products of inflammatory action by her own eliminating channels. This sort of treatment is along the line of "hematheraphy" instead of "antitoxic," when clinically concidered, although doubtless our bacteriologic friends will not admit it. We look for a clearer understanding of the nature and effect of serum injection in the treatment of diseases one of these days, and would not be surprised to find it along the lines of its opposite, blood-letting, which held full sway a century ago, and which is too often discarded at the present time, in therapeutic deductions.

Electro-Therapeutics

DR. S. H. MONELL, Editor.

PHOTOGRAPHIC DIAGNOSIS, BY MEANS OF THE RADIANT ENERGY OF AN INDUCTION COIL CURRENT OPERATING THROUGH A HIGH VACUUM TUBE.

BY S. H. MONELL, M. D.

From the Wurzburg University in Bavaria comes a recent report of an exceedingly interesting discovery. The phonograph and kinetoscope are electrical marvels, but offer little or no aid to medicine. The achievement of Professor Roentgen promises, if proved a reality, to very nearly revolutionize the diagnosis of definite organic lesions. The electric light has already been employed in its ordinary form in the treatment of quite a number of diseases. More that a year ago Dr. J. H. Kellogg described an "Incandescent Electric Light or Radiant Heat Bath," which had been used by him for three years. The bath is made in the form of a cabinet, with 50 or 60 incandescent lamps arranged in rows inside; the space between the lamps being covered with glass mirrors. The author refers to the superior penetrating power of radiant heat was compared with the convection heat of Turkish, Russian, vapor or hot-air baths. Its therapeutic value has been successfully established.

I have mentioned before in this department the illumination of Geissler vacuum tubes by the high tension current from the induction coil of my improved faradic apparatus. Another form of electrical luminosity is obtained by passing an induction current through what are known to science as Crookes' tubes. The electric illumination thus produced is radiant energy and possesses wonderful penetrative powers.

Until very lately this form of light was called radiant heat. Science is now revising the view formerly held and considers radiant energy a better term to apply to the longer vibrations of ether, which penetrate organic substances opaque to the shorter vibrations of sun-light.

Our interest in the matter relates to the report that the discoverer has already succeeded in photographing broken limbs and bullets in human bodies. Wood, flesh and other organic substances are pierced by the light and objects behind them—coin in a leather purse, metal objects in wooden boxes, the bony skeleton beneath the skin and tissues—are as readily photographed as is the human face by ordinary means. If the claims made by this Bavarian chemist are justified by further experiments, and if certain modifications of the process prove to be possible, it is at once apparent that a discovery has been made of great value to medicine, and which illustrates in an unexpected way a remarkable property of induction coil currents.

If these rays of radiant energy render the skin transparent for photographic purposes—as is claimed—the possible utility of such a method of diagnosis depends only upon the definiteness of the process. If this triumph of science can make visible to our eye the vascular system, the contents and state of the stomach and intestinal tract; determine not only the location of a bullet embedded in bone, but the presence of tumors; outline the internal organs; detect pulmonary and cardiac lesions; decide between dislocation and fracture; in fact disclose to a visual examination every distinct pathological entity and leave little more to guess work than functional derangements, then the whole art of diagnosis will be revolutionized. The mere declaration that it is in a fair way to be accomplished is one of the most astounding sensations of modern science.

The celebrated case of St. Martin, whose fistulous opening into the stomach, gave us our first definite knowledge of the most important of the physiological properties of the gastric juice, is totally dwarfed by the suggestions which spring to mind while reading reports of Prof. Roentgen's work.

Such a process would make it possible for us not only to see a pyloric cancer or a cerebral clot, but to watch the action of electric currents within the tissues; to study the effects of drugs; and make physiological research an exact science. This would place clinical medicine and electro-therapeutics upon equally firm ground.

The method is described in general terms as follows:

The vacuum tube is arranged like the lens in an ordinary camera, and connected with a proper induction coil operated by a battery. Over the end of the tube, from which the rays are focussed, a heavy cloth is then thrown in such a manner as to clearly outline the tube's end.

It is asserted that a special quality of radiant energy has been obtained through the tubes employed, with which science has not been familiar. Prof. R. also holds and claims that his newly discovered process will clearly show, as it develops, that there is no such thing as an opaque object. The penetrating power of light is regulated by its intensity and method of use, and the Professor is convinced, from the facts he has arrived at, that the greater uses of heat and electricity are not known yet; that they are capable of vast development.

While waiting for the result of his further experiments it is interesting to note the opinions of Mr. Edison, whose work in the evolution of the kinetoscope added an expert knowledged of photography in its most difficult branches to his great acquaintance with electricity. He is reported to say:

"There is nothing impracticable about Prof. Roentgen's discovery, and if the reports are correct, I consider it one of the most remarkable scientific discoveries of the age. Its possibilities may prove almost limitless. This Bavarian professor has evidently been a tireless experiment-the undiscovered wonders.

"How is it accomplished? It seems to me that his method is about like this: He has plates sensitized with chemicals that are acted on by radiant energy, which is nothing more nor less than light which cannot be seen. In fact, it is photography through vulcanite. Low waves of radiant energy pass through the sensitive plate, and the desired result is obtained. The inventor works with what we call waves of low refrangibility.

"While no such advanced idea as this man has made public has ever occurred to me, I had thought of the possibility of photographing by means of radiant light. For instance, it seemed to me that if you stood a man up and let his body form part of a partition, for instance, with rubber on each side of the body, then by means of a powerful heliostat you could throw an equally powerful ray of light directly through that body, the result being a photographic reproduction of the interior of that particular specimen of man.

"There would seem to me no rea-

son why the process of photography under stated conditions could not be so advanced as to photograph the interior of the human body by sections. Of course this would be of considerable aid to medical science. For instance if a man was suspected of having a tumor—a cancer—all that would be necessary to do would be to photograph the section of the body where the growth was supposed to exist. Then, in case of a wound by a bullet—as President Garfield's—it would be an easy matter to merely photograph the interior of the patient and locate the foreign substance without any of the painful probing surgeons now resort to.

"There is a possibility that this photography can be so developed as to put an end to all necessity for vivisection, for if by its means the entire interior of man can be laid bare most of the information the vivisectionists seek could be gained in this way. It may be possible, too, to penetrate the interior of the skull and get an exact photographic representation of a living human brain performing its functions.

"The cardinal factor of the whole matter is radiant heat (radiant energy), but I am satisfied that the Wurzburg investigator has special rays thereof and special chemical plates. There is no essential difference between radiant heat and light, both being forms of radiant energy, the ether waves differing intrinsically among themselves in wave length only, and thus producing different effects, heating, luminous and chemical, in the bodies on which they impinge, according to the nature of the bodies. The waves whose penetrating effect is generally the greatest are of greater wave length than those which most affect the eye—light rays—and have longer periods of vibration.

"This gives you an idea of what radiant energy is, and we can see by this new process what a powerful agent it can become. Take, for instance, water or any liquid so dense that by means of ordinary light it is impossible to see any distance beneath the surface. By means of this new process and the radiant heat rays that form its cardinal principle I see no reason why a photograph could not be taken of any part of the bottom of the ocean, for the rays of radiant energy will penetrate for miles, if necessary, until stopped by an object which is opaque to them.

"See how easily wrecks, sunken treasures and even breaks in submarine cables can be readily located. As a matter of fact, this process, if demonstrated, and I see no reason why it should not be, will practically lay bare nearly all the secrets of nature. Photography by means of radiant heat rays can show the mechanism of the human body in full operation.

"Any organ can be photographed and by means thereof its condition would be apparent to the eye of the medical man.

"I see no reason why, as I said, this process cannot be developed almost to infinity. It is merely a question of time and further experiment, for it is one of those things we advance with only through experiment."

These remarks of Mr. Edison were submitted by the author to a personal friend whose scientific and practical attainments in the fields of both electricity and photography enable him to fairly estimate the probabilities of the reported discovery.

The opinion is expressed by him that facts already known point the way to other facts which, if discovered by the Wurzburg chemist, would make such photography as possible as that which we now do with other light waves and plates sensitized with other chemicals on which they act. As presented by Mr. Edison the idea is something tangible, which can be comprehended as possible by the scientific mind, and which depends only upon the fulfillment of natural conditions to become an ordinary achievement in photographic work.

It is already more than a chimerical fancy and fuller developments will be awaited with great interest, especially by all who are seeking to promote the usefulness of electricity in the field of medicine.

865 UNION STREET, BROOKLYN.

Correspondence.

Editor Times and Register:—

Yesterday in looking over the "Times and Register" of January 4, 1896, the first article under Obstetrics and Gynecology, taken from the Lancet, so closely corresponds with my experience that I decided to write you in relation to the same, which you can publish if you consider it of sufficient worth:

Patient Mrs. F., aged 25, first pregnancy, married 18 months, gestation normal, healthy, fine figure, beautiful woman, well educated and good circumstances. First pains of labor at 3 A. M., December 27. Was called to see case at 6.30 A. M. Pains severe for first stage, and as frequent as every five minutes. On examination found os would only admit tip of finger and was rigid during pain, and so extremely sensitive as to cause great distress when touched by the finger. Saw patient again at 9.30 A. M. Pains still frequent and distressing and no very perceptible dilatation. At 12 M. she was suffering so severely I decided to use chloroform, having used morphia, chloral and bromide to no purpose. Chloroform did not affect her as rapidly or profoundly as it does most cases and when she seemed to be "asleep" the most careful examination would "wake" her at once. I kept her relieved by chloroform till nearly 6 P. M., when dilatation had progressed to about the size of a 25-cent piece, pains still as often as five minutes, os very sensitive and pains even more distressing than they had been.

It occurred to me that if some local anesthetic could be applied to the os I might be able to dilate the same.

It was quite natural to think of cocaine for local use, and although I had never used it or heard of its being used there (except for the vomiting of pregnancy). I procured a 10 per cent. solution, saturated a pledget and applied it to the os and waited ten minutes or so, when, upon examination, I was surprised as well as delighted to find the os fully dilated, the sensitiveness gone and, as the patient was now "asleep," and had suffered 15 hours of pain, I advised the use of the forceps, delivering at once, and patient made the usual uncomplicated recovery. I propose to try cocaine in every similar case till I prove or disprove its efficacy.

CALVIN F. KYTE, M. D.,

316 Pavonia avenue, Jersey City.

WAYSIDE NOTES.

By Ernest B. Sangree, A. M., M. D., Philadelphia.

To the average American probably the most striking peculiarity in the daily life of the Continentals is the sang froid with which they attend to the demands of nature. A party of ladies and gentlemen will be sitting at a cafe table, sipping wine or beer, when, suddenly, with or without an "excuse me," a lady or gentleman will rise, calmly walk to the closet, perhaps in plain sight of the table, and shortly return in as matter-of-fact a way as the departure was made. If thrown in her company for a half hour or so, a German gentleman thinks it quite polite to inform a lady as to the location of the water closet in any particular place, even though she may not have manifested any desire for such knowl-

edge. Americans, I noticed, soon fall into these ways and what would shock them at home, becomes of no moment over there. We go on the principle in this country that human beings have neither rectum nor bladder, or that if a man is unfortunate enough to possess either of or both these organs, he must attend to their wants secretly and surreptitiously, as crimes are performed. Over there closets and urinals are to be found at about every third street corner. Some are free, some are to be paid for, My first introduction to the latter class gave me a gentle shock, from which, however, I soon recovered. Upon entering the door of a neat-looking closet in a large summer garden, I was instantly met by a short, dumpy little woman of some 45 summers, who darted towards me along the narrow hallway and hastily interrogated thus: "Erste oder zweite?" (first or second).

Concluding that as everything else in Germany was divided into two or three classes, this business probably was, too, and not being a proud man nor of noble blood, I intimated that second-class would doubtless satisfy my humble wants.

With a celerity born of years of experience and countless repetitions, she opened a little door to my left, jerked up a plain white little chamber pot from the floor in one corner, set it on the side of a closet seat in another corner, darted out of the room and shut the door. No sooner had I opened the door again than she reappeared as quickly with her hand outstretched for the expected five pfennige, the official price. Afterwards as a matter of curiosity I tried the first compartments, at ten pfennige, but beyond a few more adornments in the room and a somewhat ornamental chamber pot instead of a severely plain one, it was five pfennige thrown away.

It struck me, however, that they often carry this indifference too far. At many points, in the open, are arrangements similar to the urinals in our public buildings, only all that shields the man's back is a metal fence as high as his shoulder. Thus it happens that from an omnibus top, if one glances down at a place of this kind in full blast, one's eye cannot help witnessing gentle parabolic curves proceeding from organs which we have been taught should, and which ought to be, decorously concealed from the public gaze. This infraction of public decency I noticed especially in Italy, the lower part of Switzerland and in Paris. London has the best arrangement of all, though unfortunately too few in number. At the intersection of certain of her irregular streets one will find a railing protecting a ground glass sky-light. Steps at either end lead down to an excellently-fitted up, clean-smelling compartment with a row of urinals on one side and closets on the other. The urinals are free, while if one wishes to use a closet, a penny dropped in a slot opens the door automatically. For an additional penny an attendant will permit the use of soap, water and a clean towel. It is the greatest pity in the world that we do not have such places in our own large American cities.

Current Medical Literature.

HOT WATER AND ULCER OF THE STOMACH.—Dr. Achilles Rose said he was aware that drinking hot water had become very popular, and it had become necessary to sound a warning. It had been shown by collective investigation that a great many cases of ulcer on the stomach occurred in cooks. This had led to the supposition that it might be due to tasting hot soups, etc., consequently laboratory experiments were instituted on dogs by pouring water, about of the temperature usually prescribed for patients, through a tube into the stomach. These dogs were killed from day to day and week to week, and it was found that the hot water first caused a hyperemic spot, and, in course of time, ulcer of the stomach. Dr. Rose was once visited by a cook, whose master's physician had prescribed for her drinking very hot water. Dr. Rose found that she was suffering from ulcer of the stomach, a condition contra-indicating hot water treatment.
—Med. Rec.

ARE SANATORIA FOR CONSUMPTIVES A DANGER TO THE NEIGHBORHOOD?

(Sind Lungenheilanstalten eine Gefahr fur die Umgebung?) Dr. Nahm (Munch. med. Wochenschr., October 1, 1895). The medical officer to the well-known sanatorium at Falkenstein has collected information from the death registers of that district with the object of seeing if the deaths from phthisis amongst the inhabitants have been more numerous since the establishment of the institution and the consequent assemblage of consumptives in the locality. He gives a table, extending from 1856 to 1894, showing for each year the total number of inhabitants, the deaths from pulmonary tuberculosis and those from all other causes. From these figures he calculates the death rate for tuberculosis per 1000 living for twenty years before the building of the sanatorium, and compares this with the tubercular death rate from 1877 to 1894, during which time the institution has been in existence. A similar comparison is made on the basis of the percentage of deaths from tuberculosis to the total deaths from all causes. He finds that in the first period—before the sanatorium existed—the deaths from tuberculosis averaged four for every thousand persons living, whilst in the second period, where a large number of consumptives were living in their midst, the deaths from this disease amongst the inhabitants fell to 2.4 for every thousand living.

The figures are of such interest, in view of the objections raised by the inhabitants of places selected for the establishment of sanatoria for consumptives, that they may be put in tabular form to facilitate comparison.

Average Death-rate From Tuberculosis Amongst the Inhabitants of Falkenstein.

Before the sanatorium existed (20 years).
4.0 per 1000 living.
18.9 per cent. of all deaths.

Since the establishment of the sanatorium (18 years).
2.4 per 1000 living
11.9 per cent. of all deaths.

In the face of these figures Dr. Nahm considers the outcry as to the danger of the neighborhood being infected by the erection of sanatoria for consumption is without justification.—London Practitioner.

A NEW METHOD OF ESTIMATING ALBUMEN IN URINE.

Riegler (Wien. Med. Blatter, November 28, 1895) brings forward a new and rapid method of estimating albumen by means of the refractometer. It depends upon the power of his new reagent, asaprol, to pre-

cipitate all albuminous substances in acid solution; the precipitate is soluble in weak caustic soda or potash, and the refractive index of the solution bears a direct relation to the amount of albumen present. In practice the asaprol (10 per cent.) is made up with 10 per cent. concentrated hydrochloric acid. Exactly 25 c. cm. of deci-normal potash solution are used, and added to the precipitate resulting from the mixture of 5 c. cm. of asaprol solution with 50 c. cm. of urine. The refractive indices of the potash solution are determined by Pulfrich's refractometer, and their difference of albumen present. The coefficient 270 was determined by Riegler as the result of experiments on measured quantities of albumen.

—Brit. Med. Jour.

AN INTESTINAL ASTRINGENT FOR CHILDREN.

In the treatment of various diarrheal affections of childhood it becomes necessary to resort to the use of astringents in order to arrest profuse and exhausting discharges. As is well known, the latter quite often persists even after means have beeen taken to free the intestinal canal of all irritating materials by the employment of purgatives, rectal irrigation and the administration of intestinal antiseptics. In the selection of such an astringent, however, greater difficulties are encountered in the case of children than in adults, owing to the greater tendency of disturbing the digestion apparatus, of producing nausea, vomiting and of increasing the existing anorexia. According to a communication presented to the Paris Academy of Medicine, at its meeting, December 3, 1895, from Dr. Moncorvo, of Rio Janeiro, Tannigen is an ideal astringent for the diarrheas of childhood. He states that this drug is absolutely tasteless and odorless, and was well tolerated by all the little patients, being given in gruels in doses ranging from 4 grains four or five times daily to 30 grains pro die. It was well borne even by very young infants, and never produced vomiting, gastralgia, colic or malaise. In cases where salicylate of bismuth or benzo-naphthol had proved unsuccessful Tannigen gave excellent results. Dr. Moncorvo's experience goes to show that this drug, given alone or in combination with the insoluble intestinal antiseptics, can be always depended upon to render good service in the treatment of diarrheas of children, whether of acute or chronic character.

ICHTHYOL SALTS OF ALKALOIDS.

At a meeting of the Liverpool Chemists' Association, held November 28, Harold Wyatt, Jr., read a communication on a reaction of ammonium ichthyol sulphonate. A prescription he had to dispense had brought under his notice a decomposition occurring when ammonium ichthyol is brought into contact with alkaloids or their salts. The formula was:

Morphine hydrochlor	4 gr
Ichthyol ammon	30 gr
Ung. petrolei, ad	1 oz

On rubbing the morphine hydrochlorate with the ichthyol on an ointment slab the smooth cream at first formed suddenly became clotted, drops of watery liquid separated, and the clotted portion left the tile and adhered to the spatula. A smooth and presentable ointment was ultimately produced by the addition of 2 grains of powdered soap.

The author found that when morphine hydrochlorate and ichthyol were heated over a water bath the ichthyol became solid, leaving a clear aqueous fluid containing chloride of ammonium. It was evidently an instance of double decomposition resulting in the formation of a morphine ichthyol-sulphonate and ammonium chloride. The pure alkaloid morphine gave a similar compound with evolution of ammonia gas, and a corresponding result was found with quinine hydrochlorate and ammonium ichthyol.

From this it will be seen that alkaloids form ichthyols as readily as do the alkali metals, the resulting ichthyols being of firmer consistence and well suited to internal administration in pillular form.

—American Druggist.

PILOCARPINE IN DIPHTHERIA.

Ten drops three times a day of a one per cent. solution of pilocarpine hydro-chlorate has been found efficient as a prophylactic against diphtheria by a Hungarian physician, Dr. Sziklai. The dose mentioned is that for a child over a year old. It is especially valuable in preventing the spread of obstructing false membranes in diphtheria and croup.—Denver Med. Times.

PILOCARPIN IN INFLUENZAL PNEUMONIA.

Poulet, of Plancher-les-Mines (Nouveaux Remedes, November 24), has used hydrochlorate of pilocarpin in influenzal pneumonia with very good results. During an epidemic which prevailed in that neighborhood in February, 1895, and which attacked more than 1000 out of a population of from 3000 to 4000, he treated 108 cases in which pneumonia and broncho-pneumonia were formidable complications with pilocarpin, with only four deaths. He gave the drug in daily doses of 5 centigrammes, except in the case of children, to whom a proportionally smaller amount was given. The treatment generally lasted two days only in a few cases three days. The treatment was successful in several cases of old people over 70 years of age. It is to be noted that pilocarpin was by no means equally effective in pneumonia complicating whooping-cough in children.

—British Med. Jour.

WASN'T INJECTED WITH ANTITOXIN.

A diphtheria scare at Rockland, Me., frightened one young woman into wearing a tarred rope about her neck, a camphor bag on one shoulder and a sulphur bag on the other, and powdered sulphur in her shoes, and even then she caught the disease after all.

LIKE SOME PROFESSIONAL FAKES.

The germ theory in its relation to treatment by toleration is so often carried to excess of imagination that it resembles a story in a recent French work of fiction in which figures a quack who has made his fortune by selling influenza honey. How he produced it was as follows: The bees were kept in a large conservatory, or, at any rate, under glass, so that they could only pasture on the flowers provided for them, and of course these were chosen for their medicinal properties. Hence ready-made physic of the most delicious kind was garnered. This was laughed at as an extravagant invention; but it was not quite so absurd as some of the critics imagined. Beekeepers intent on producing a luxury are annually more and more inclined to experiment on similar lines. The difficulty really lies in educating the palate of the average consumer, to whom honey is merely honey, a breakfast table relish, varying in quality hardly more than salt.

Ophthalmology.

J. A. TENNEY, M. D., Boston, Editor.

THE TROPOMETRE.

In the Annales D'Oculistique Dr. Stevens describes an instrument that he has devised for measuring the excursions of the ocular muscles, which he calls a tropometre. It consists of a telescope containing a graduated scale, which, being brought to bear upon the eyes of the patient, will accurately measure the movements of the eye in every direction.

Dr. Stevens claims, what every-

body will admit, that tenotomies should leave binocular vision at all normal points, in order to be successful in the best sense. Heretofore we have been obliged to depend upon the amount of heterophoria we could find, and upon the power of the various muscles to overcome prisms, in order to ascertain how much we have done by tenotomies in the way of adjusting the eyes to binocular vision. Those who have followed Dr. Stevens carefully have learned that he does not make statements or recommendations without thought, and we apprehend that the use of this instrument will supply the missing link in the accurate adjustment of the visual axes in cases of heterophoria.

CHRONIC GLAUCOMA.

At the last meeting of the British Medical Association Mr. Nettleship called attention to the fact, that, in chronic glaucoma, operations are often negative in result, and occasionally harmful; and that the progress of the disease is so slow, in now and then a case, lasting ten years or more before vision is destroyed, that if an operation has been performed early it could hardly be said to have had any share in the result.

But, as a rule, Mr. Nettleship believes that early operations are best; and when both eyes are affected he chooses the better eye for operation first. He believes that waiting until the vision in an eye is so materially injured as to drive the surgeon and patient to action is largely responsible for the general disbelief or weak belief in the benefit to be derived from operative interference in this disease.

As portions of the iris have often undergone a process of atrophy in chronic glaucoma, Mr. Nettleship calls attention to the advisability, recognized by ophthalmic surgeons in general, of removing its most healthy looking portion.

In the discussion following the reading of the paper Mr. Critchett dwelt upon the importance of forming a cystoid cicatrix in all cases, if it could be done, and said that any ophthalmologist who could devise a sure method of forming such a cicatrix would deserve the lasting gratitude of his countrymen.

VARYING EFFECT OF TENOTOMIES IN HETEROPHORIA.

At the last meeting of the American Medical Association Dr. Theobald, of Baltimore, stated that tenotomies for heterophoria often produced little or no effect, for causes imperfectly understood. He enumerated some causes for the negative results obtained, stating that operations affect the muscles of a prominent eye more than one that is deep-set; that a myopic eye is more affected than one that is hypermetropic, and that much depends upon the firmness of texture of Tenon's capsule. He had found the least effect from the operations for esophoria.

He left out one of the most prominent causes of failure in these operations, namely, want of power in the opposing muscles. If a patient has an esophoria of twelve or fifteen degrees, with adduction equal to thirty or forty, and the abducting power not more than two or three degrees, the external recti may recover some power when the internal recti are severed, and they may not.

The writer once had a case of esophoria of this description; and after completely severing both internal recti twice, at intervals of several months, loosening Tenon's capsule as thoroughly as possible each time, the power of adduction was brought somewhere near to a normal standard. The adduction in this case is at present 25 degrees; the abduction being about 6; but when the patient is run down in health, the power of abduction will sink to two or three degrees.

If Savage's method of muscle shortening had been known when these operations were performed, it would most certainly have been employed, as it has been successful in many cases since that time, in the writer's practice. The older methods of advancement of the ocular muscles are too uncertain in their results to admit of their use in such cases.

German and Italian

Translated by DR. F. E. CHANDLER.

A CASE OF SYRINGOMYELIA IN A CHILD.

E. C., a boy 6 years of age, was brought to my dispensary on April 27, 1895, for treatment of obstinate diarrhoea. The looks of his hands made me think that he had some other trouble as well, and I proceeded to make a thorough examination of him, with the following result:

The parents of C. are natives of Savoy, but have lived in Geneva for several years. They never dwelt in any other country, and present no signs of nervous or other troubles.

The personal antecedents of C. are as follows: Only child, he was born at term the delivery, cephalic, was difficult, the head passing out very slowly. Whether or no the midwife who assisted the mother used violent and intempestive maneuvers is difficult to determine. Be this as it may, the child was in a state of blue asphyxia.

He was fed from a spoon; digestive troubles rather frequent. He cut his first tooth when between 8 and 9 months old; he only commenced walking last year. In 1893 he had a severe burn from a hot brick that was placed in his bed; treated at that time in the hospital of Gex, by Dr. Bollivet, he was operated upon for a phymosis that caused him difficulty in urinating; at this epoch two cauteries were applied to his saerum.

In 1894 measles, without particular incident; whooping cough, in the first months of 1895.

It is impossible to give the precise date of the commencement of his present malady; it is positive, however, that his mother had noticed for more than two years that he burnt humself frequently without seeming to feel any pain and that whitlows had often formed on his fingers.

The child is of medium size, emaciated; skull and face normal, as is also the palate; dentition bad.

Moderate scoliosis, with convexity directed towards the right; thorax depressed, on a level with the episgastric hollow; no rachitic deformities.

Hands large (cheiromegalia), short, cyanosed; the left hand presents the following lesions: The terminal phalanx of the index finger has almost entirely disappeared; a little bit of nail still remains (old whitlow); the terminal phalanx of the medius is separated from the rest of the finger by a well pronounced crack. The extremities of the thumb, annular and little finger are swollen and the nails curved in.

On the right hand the terminal phalanx of the thumb has disappeared (old whitlow); index and medius still intact; annular and little finger have remnants of thickened nails.

The thenar and hypothenar eminences are as little marked as the other muscles of the upper limbs, but do not present distinct signs of atrophy.

The lower limbs do not show rachitic deformities; the muscular masses are equally of little volume; the feet are cyanosed, always cold, rather flat, but can be elevated without difficulty (absence of paralysis of the extensors). The skin on the front of the knee shows traces of ancient wounds; the nails of the great toes are thickened; the last phalanx of the right fifth toe does not exist. It was lost after a severe burn.

When on his feet the child has a tendency to lean forward; he walks

with his legs separated and strikes his heel like a person with ataxia; Romberg's sign very distinct.

Tactile sensibility is normal; sensibility to pain is much diminished in the hands and feet; thermo-anesthesia seems to exist; anyhow, the child distinguishes with difficulty a hot from a cold object. The patellar reflexes are abolished. No incontinence of urine, but incontinence of fecal matter which is lienteric. The other organs present nothing in particular.

Subsequent examinations of the sensitiveness gave no very precise results, which is always probable when we seek the variations of this faculty in a child; exact replies being by no means easy to obtain. What continues in every case is the analgesia of the whitlows, that still develop, and of the burns that the child gets.

In July, increase of volume with redness of the right annular. The boy is sent to the Children's Hospital, where he is examined by MM. E. Revilliod, Martin and Binet, who think that it is a case of Morvan's disease.

On October 18, I see my patient once more. The terminal phalanx of annular has disappeared; the swelling and a bony fistula remain; the whole of the little toe has gone.

Now (Nov. 1, 1895) all the fingers of the left hand have lost completely, or nearly so, their last phalanx; the right medius shows signs of a bone whitlow, which is opened.

Examination with electricity, carried out as completely as possible, seems to show that there is no degenerative reaction and that the muscles contract in proportion to their volume.

To sum up, we have a child 6 years old, presenting as essential troubles:

I. Deep whitlows, bony, multiple, developing without pain.

II. Complete analgesia, manifested especially by burns and coincident with integrity of tactile sensibility.

And as accessory symptoms:

(a) Dorsal scoliosis.

(b) Abolition of patellar reflexes.

(c) Romberg's sign.

(d) Incontinence of fecal matter, or at least excessive relaxation of the sphincter ani.

These different symptoms may be found in Guinon's article on Syringomyelia, in Vol. VI, of the Traite de Medicine, under the following heads:

Posterior polyomyelic symptoms: namely, analgesia with probable loss of thermic sensibility with conservation of the tactile sense.

Median polyomyelic symptoms; State of the skin and subjacent tissues.

Posterior leucomyelic symptoms: Romberg's sign, abolition of patellar reflexes, inco-ordination of movement.

Exceptional symptoms: Incontinence of fecal matter.

This discussion brings us face to face with two possible diagnoses: Syringomyelia, because of the conservation of tactile sensibility; the dissociation of thermic sensibility and the signs of a disease of the posterior columns; Morvan's disease because of the multiple and analgesic panaritia.

The unicity or duality of syringomyelia and Morvau's disease have been much discussed, and at the present time the majority of observers are in favor of the second hypothesis; subsequent autopsies can alone settle the question.

My observations may be placed in the category of those intermediate cases which are defined by Charcot as Morvan's type of syringomyelia.

Now the question of its etiology: as far as I am aware, no case has ever been published concerning so young a subject.

Can difficult birth be regarded as a cause of hematomyelia? This question is by no means settled. The data collected by Minor (I) prove the characteristic symptoms of syringomyelia may come on in transmatism following injury to the spinal column.

Minor cites a case with autopsy where he found, besides a fracture of the last dorsal and first lumbar vertebrae, a hemorrhage at this level ex-

(I) Actes du Congres international de Berlin. Vol. IV, p. 4. (II) Congres medical de Bordeaux, 1895.

I) Congres Medicale de Bordeaux, 1895.

—Revue Med. de la Suisse Rom.

tending downwards as far as the sacral plexus (queue de cheval), and upwards as far as the exit of the accessorius passing along the left posterior cornu with participation at intervals of the posterior half of the anterior cornu and of the commissure.

In addition to this there was a dilation of the central canal, especially in the neighborhood of the points where hemorrhage was most pronounced.

In this way the presence of symptoms of syringomyelia in certain cases of traumatism can be accounted for.

We may also note the fact that Grasset (II) thinks that those forms of syringomyelia which are caused by "cavitary" myelitis come from infection. Mayet (I) says that while experimenting with inoculations of unfiltered cancerous juice in a rat, he obtained unmistakable symptoms of syringomyelia; the autopsy showed a distinct central cavity.

PERMANGANATE OF POTASSIUM FOR BURNS.

Picric acid has often been recommended for use in burns, but it has the drawback of forming powerful explosives. Permanganate of potassium is perfectly harmless and may be advantageously employed for the same purpose. M. Nodon, electrician and chemist, who fathers the idea, states that he has often had occasion to use it in cases of burns produced by electricity, and can testify to the good results obtained from its use. The solution of permanganate must be applied as soon as possible after the accident and continued for several moments. The affected part is colored black by the formation of peroxide of manganese, the intense burning pain ceases almost immediately, and one or two days later the destroyed tissues are reformed, and all traces of the accident have disappeared.

As there is no factory laboratory, however modest, that does not have the permanganate among its chemicals, the suggestion of M. Nodon is good to remember.

—Le Progres Medical.

MORTALITY FROM DIPHTHERIA SINCE THE INTRODUCTION OF THE SERUM.

Counting the cases of mortality from diphtheria, in France, during the first semester of the years 1888 to 1894, Mr. H. Monod found the average to be 2.627. During the first semester of 1895 it was only 904 deaths or a diminution of 65.6 per cent. If we consider that diphtheria is more common in the country than in the towns, we may figure 15,000 the number of lives saved in France by the use of the serum.

—Le Progres Medical.

THE ACTION OF PARACHLOROPHENOL IN TUBERCULOSIS.

Dr. A. Sprengler, (St. Petersburg Archives of Biological Sciences, T. iv I), says: "As has been demonstrated by the experiments of Prof. Karpow, parachlorophenol has the power of disinfecting the anthrax bacillus. Tchourilow has used it with success in erysipelas; Elsenberg in the treatment of lupus; Dolganow in serpigenous ulcerations of the cornea; Simanowsky used it in the treatment of tuberculous diseases of the larynx and upper air passages; Ch. Girard advised its use in surgery." Dr. Sprengler, who is Simanowsky's pupil, has undertaken to complete his master's researches by studying this drug clinically in Simanowsky's wards, while carrying on simultaneous bacteriological investigations in Nencki's laboratory.

For his experiments, S. used pure cultures of the tubercle bacillus and sputa from consumptives, with subacute phthisis, whose lungs were badly affected. Saturated aqueous solutions of parachlorophenol were prepared as follows: Twenty cc. of parachlorophenol crystals were melt-

ed on the sand bath and mixed with 400 cc. distilled water; the mixture heated without boiling and cooled in water. The liquid was now left to stand for 24 hours and filtered after decantation. A 0.0198 per cent. solution was thus obtained. This was used on both the cultures and the sputa. After a short time cultures and sputa were taken from the solution and washed in three tubes of water in order to remove all the parachlorophenol.

They were then diluted in distilled water and injected into guinea pigs. Other guinea pigs received injections from the same cultures and sputa, which had not been treated with parachlorophenol. These latter guinea pigs were infected, while nothing happened to the animals who had received injections of the cultures or sputa, sterilized with parachlorophenol.

The sterilization of the sputa was more difficult than that of the cultures, probably on account of the presence of the mucous and albuminoid ingredients which obstructed the penetration of the parasiticide.

Numerous clinical observations collected and analyzed in this memoir, show the favorable action of this treatment in tubercular affections of the larynx.

Dr. Sprengler closes with the following conclusions:

1. Solutions of parachlorophenol in solutions of 10 per cent. or over, also even pure, applied locally by swab or by friction, cause a cicatrization of superficial and deep tubercular infiltrations.

2. No phenomena of irritation are present.

3. Solutions of parachlorophenol in glycerine have an anesthetic property in tubercular affections; this anesthesia lasts several days, while anesthesia from cocaine is of short duration.

4. Parachlorophenol has the advantage over lactic acid and the operative treatment in that it can be safely applied to all forms and degrees of laryngeal tuberculosis, even in the very last stages.

5. It acts favorably upon, and often cures, lupus of the mucous surfaces.

6. Parachlorophenol is one of the most energetic disinfectants of tubercle bacilli, both in pure cultures and in sputa.

TREATMENT OF SCROFULA WITH MERCURY.

E. Giampietro (Gazetta degli Ospedali, 21, xi, '95), writes: "The preparations of iron formerly so generally used in scrofula often had an unfavorable action in the torpid forms of the disease, the local action of the drug upon the glands and mucosa being distinctly bad.

Treatment with sulphur was only occasionally successful.

Much better results are obtained from the use of mercurials.

In scrofulous, glandular tumors, a daily injection of one cc. of a one per cent. sublimate solution is made. After a while a distinct improvement will be noticeable. Further treatment should be one mg. sublimate dissolved in 50 cc. water, with the addition of one gramme NaCl. Fifty grammes decoctum cinchona must be given every morning. With this treatment the chronic catarrh will be cured in a relatively short time, and the general condition much improved.

This form of treatment was tried by G. in 48 cases of scrofula and in three cases of lupus. The three cases of lupus were cured by curetting, cauterizing with Ag. N O3, and the daily internal administration of one mg., Hg. Cl2. Treatment of 370 cases of otorrhea of tubercular origin with Hg Cl2, resulted in the complete cure of 360 of them.

HOW TO RECOGNIZE DAMPNESS IN DWELLINGS.

Place one Kg. freshly slacked lime in the suspected room, and then hermetically close doors and windows. In 24 hours, weigh the lime. If its weight has increased more than 10 grammes (one per cent.), the room is too damp for health.

—Therap Wochensch.

Current Surgical Literature.

T. H MANLEY, M. D., New York, Editor.

ICHTHYOL IN THE TREATMENT OF BURNS.

The Semaine medicale for November 13, publishes an article on this subject by M. L. Leistikow, of Hamburg, an abstract of which appears in the Revue Internationale de Medecine et de Chirurgie Pratiques for December 10. The writer states that the author's experience with this drug for a period of six years has shown that of the numerous means recommended for the treatment of burns ichthyol is the best and the most practical. It allays the pain and causes the disappearance of the congestion as well as of the edema of the skin, not only in burns of the first degree, but also in those of the second degree, provided that all the blisters have been previously opened. In the latter case the regeneration of the epidermis begins very soon under the influence of the ichthyol; at the same time desquamation is produced, or any eschars which may exist fall off. For burns of the first degree M. Leistikow employs the following mixture: Zinc oxide, 75 grains; magnesium carbonate, 150 grains; ichthyol, from 15 to 30 grains. For burns of the second degree he uses the following paste: Zinc oxide, 75 grains; prepared chalk, powdered starch, linseed oil, and limewater, each, 150 grains; ichthyol, from 15 to 45 grains. The applications of powder and paste are renewed every twenty-four hours. In cases where the inflammatory symptoms are very intense the powder and the paste may be combined as follows with good results: The burned parts are covered with the powder, over which a layer of the paste is applied.

—N. Y. Med. Journ.

A CASE OF UMBILICO-VESICAL HERNIA.

According to La Semaine Medicale, August 21, Dr. Lannelongue reported to the Congress of Gynecology, Obstetrics and Pediatrics recently held at Bordeaux, the following interesting case: Some years ago a woman brought to him a male infant, aged 3 months, which passed water, both through an umbilical appendix resembling a penis, and by the natural organ, which was in its proper place. The jet which came from the umbilical canal described a curve more than 30 centimeters in diameter. On examination, it was found that the apparent abnormal pelvis was an umbilical hernia caused by the persistence of the urachus. A urinary fistula had been produced on the separation of the umbilical cord. The child subsequently died, and the author had an opportunity to make a necropsy. The bladder was injected, and it was then seen that the viscus was prolonged by a channel as large as the forefinger, namely the urachus, up to the umbilicus. The channel extended into the external appendix, where it opened by an oblique orifice resembling the meatus urinarius. The contractions of the bladder in micturition caused a stream in both directions, umbilical and urethral, hence the double jet of urine seen from time to time; this, however, was exceptional, as the musculo-elastic ring of the umbilicus fulfilled the function of a sphincter and prevented the escape of urine through that orifice. The author suggests that this case once more shows the necessity of tying the umbilical cord only after having satisfied one's self that there is no hernia at the proximal end.

SEROTHERAPY IN CANCER.

J. Hericourt and C. Richel describe (Compt. Rendus) the treatment adopted in a case of sarcoma, serum obtained from animals, into which the extract from a tumor had been injected, being used with good results. In general, the results are: Pain has been diminished and ulcerations ameliorated, tumors reduced in bulk, the progress of the disease checked and the general conditions improved. No absolute cures have been effected, and it is difficult to say if the serum is a specific or not. The effects are however, such as almost to approach the cure of the disease.

—American Druggist.

A REMEDY FOR BLACK EYE.

There is nothing to compare with the tincture or strong infusion of capsicum annuum mixed with an equal bulk of mucilage or gum arabic, and with addition of a few drops of glycerine. This should be painted over the bruised surface with a camel's hair pencil and allowed to dry on, a second or third coating being applied as soon as the first is dry. If done as soon as the injury is afflicted, this treatment will invariably prevent blackening of the bruised tissue. The same remedy has no equal in rheumatic sore or stiff neck.

— Medical Progress.

CHILBLANS.

Professor Boeck, of Christiania, uses for chilblains: Resorcin, ichthyol and tannin, each 30 grains; water 150 grains; painting the affected parts at night. This discolors the skin, so that if the affected part be an exposed one the following may be substitutel: Resorcin, 60 grains; gum arabic, 38 grains; water, 115 grains; talcum powder, 15 grains.

—Brooklyn Med. Jour.

CONTRACTED BLADDER TREATED BY GRADUATED FLUID DILATATION.

BY MAYS ROBINSON, F. R. C. S.

In a patient presenting symptoms of vesical calculus a sound was passed in order to determine the size of the bladder. As soon as the sound entered the bladder it impinged against a hard calcareous material, and bimanual examination revealed the fact that there was practically no bladder, that organ being merely represented by a small hard lump about the size of a walnut. The urethra was dilated and phosphatic concretions lining the minute cavity were scraped away. The bladder was then found to hold only one-half ounce of fluid. There was incontinence of urine both before and after the operation. The bladder was irrigated with boric acid solution daily, and on each occasion the urethra was compressed around the nozzle of the syringe, and moderate force was used to increase the capacity of the organ. In a few days incontinence ceased. Later, ether was given and the bladder was distended with boric acid solution, and it was found that the capacity had increased to two ounces. A later dilatation without ether started up some vesical irritability, but in spite of this fact, improvement continued, and the patient was discharged with a bladder able to hold eight ounces of urine, which was normal. In this case, as in all cases in which there is no contra-indication, salol and boric acid, each five grains, were given three times daily. The use of these drugs has done much to abolish post-operative urinary fever.

TREATMENT OF BUBOES BY INJECTION OF VASELINE AND IODOFORM MIXTURE.

M. Fontau, professor of surgery at the Military School of Medicine, at Toulon, in the "Archives de Med. Militaire," gives the following as the technique of a method which, in his hands, has acted like a charm in curing buboes.

First—Thorough scrubbing of the part with soap suds.

Second—Puncture, if the skin is thin.

Third—Complete exposure of all purulent and infected fluids.

Fourth—Injection of iodoformed vaseline—1 to 10 parts— warm.

Fifth—Dressing with the bichloride dressings.

After evacuation of the pus, it is important that all the sinuosities of the abscess be thoroughly irrigated and cleaned out by bichloride solution. The cavity must be then well distended with warm iodoformed vaseline, the edges of the incision brought together and all well retained with special bandages.

Jour de Paris, Step., '95.

TREATMENT OF GONORRHEAL RHEUMATISM.

Dechard (These. de Paris) after having diligently tried the various medicaments for gonorrheal rheumatism, is of the opinion that mercury, by hypodermic injection, or inunction over the articulation, stands in the front rank. It seems to have an electic action for the poison of the disease.

Revue de Chirurg., Dec. 1, '96.

PSEUDO-NEOPLASTIC TUMORS OF THE ORBIT.

M. Panus (Arch. D'Ophtalm., Sept., 1895), calls attention to the common error of too readily condemning all larger orbital tumors as malignant; as many are syphilitic, or toxic. The principal avenue of infection is through the various or lymphatic plexuses, in the mucous membranes, producing infective tumors. In all cases of reputed sarcomatous tumors of the orbit we should not only endeavor to definitely decide diagnosis by a histological examination, and test the character of the lesion by treatment before considering surgical measures of relief. Mercury, the iodides and arsenic should each be tried; and the toxines of erysipelas tried; or the pus cultures of the streptococci. The serum streptococci is less dangerous and we may augment its toxicity by the addition of the coccus-prodigiosus. The injection may be made directly into the tumor or at its periphery through the vessels. Surgery is often impotent in many of these cases of supposed myelomata and lymphadenoma, though it is proper to utilize it after all other therapy fails.

SURGERY OF THE URINARY PASSAGES.

Guyon has made many experiments of animals with a view of determining the relative value of the various operations for enlarged prostate, and has come to the conclusion that we can accomplish all the benefits of a castration, with none of its dangers, by a simple resection of the vas-deferens.

Pilcher calls attention to the dangers of castration for prostatic hypertrophy and affirms that it is useless in any event in true adenoma.

Faulds claims that castration for prostatic enlargement is always dangerous and generally without utility. He never saw atrophy of the gland follow, and believes that it is a procedure which should not be permitted.

—Revue de Chirurg., Dec., '95.

NEW METHOD OF TREATMENT FOR PYLORIC STENOSIS.

Ogston has lately published his experience with a new method of dilating the contracted pylorus. He begins by having the patient swallow a celluloid ball of small dimensions, encrusted with sugar. This is repeated every other day, until one of large size is swallowed. As they pass the strictured pylorus there is a sharp colicky pain. The author employed this means in four cases. Only one persisted in treatment. With him the resunlt was a practical cure; the stricture having been stretched from 16 to 40 millometres.

—Lancet, p. 739, vol. 195.

TRANSPLANTATION OF LARGE SKIN GRAFTS.

M. Krause, of Altoona, has for several years had excellent success in the treatment of large, lupoid ulcers on the face and legs, in burns, with large flaps of skin transplanted from other parts of the body. Rigorous asepsis is practiced, the integu-

ment is removed after the method of Thiersch; only the section is deeper, through the derma. The operation is dry; only a weak salt solution being employed for sponging. Hemostasis must be complete, but care must be taken not to unduly press on the surface of the capillaries. The borders are satured in place, and the whole kept in position by the pressure of light dry dressings.

—Bulletin Med., 2 Oct., '95.

Current Literature in Obstetrics and Gynecology.

E. D. KINNEY, M. D., Boston, Editor.

CHOLERA AND PREGNANCY.

Kovalsky (Repert. Univ. d'Obstet. et de Gynec., October 25, 1895) after considering the experience gained in Russia on this question, concludes that pregnancy does not appear to predispose to cholera, though the small percentage of cholera cases amongst pregnant women is explained by the small number of such women relatively to the general population. The prognosis is extremely grave for the fetus, and the mortality of 81 per cent. is, perhaps, lower than might be expected. As for the mother, the danger does not seem much greater than in a non-pregnant subject; 57.8 per cent. is the proportion, according to experience, in Russia. Between 20 and 40 seems the most susceptible age. This represents the greater part of sexual life. It is not clear why younger pregnant women should be less subject to cholera. Most probably the truth is explained by the number of married women over 20 being relatively larger. Kovalsky frankly admits that no ratios of any kind of scientific value can be established between the presence of cholera and the period of pregnancy, the previous sexual history of the mother or any other essential obstetric factor—even the possibility of abortion.

THE UTERUS IN ECTOPIC GESTATION.

Pilliet (Ann. de Gynec. et. d'Obstet., October, 1895) has studied the histology of the modifications which the uterus undergoes in tubal gestation. He finds that the development of a decidua in its empty cavity during ectopic pregnancy is more than a pathological phenomenon; it is a distinct clinical complication. As long as the decidua remains in place the uterus is practically in a condition of subinvolution; hence both hemorrhages and membranous dysmenorrhea may occur. When the decidua has been shed there is danger of diffusion of metritis to the whole uterine muscle. Pilliet adds rather significantly that the etiology and pathology of endometritis are both obscure, and that probably ectopic gestation, overlooked in the early stages, may account for many peculiarities in cases of endometritis hitherto hard to explain.

OVARIOTOMY IN A CHILD OF 6.

Rein (Repert. Univ. d'Obstet. et. de Gynec., October 25, 1895) operated successfully, at Kieff, on a girl aged 6. The tumor was a multilocular cyst of the left ovary. On the third day the patient's period ("regles") appeared. It is noted in the report that puberty was premature in this case, Rein believing that the abnormal phenomenon was the cause of the development of the cyst. The author, however, does not state that any symptom of precocious maturity was noted before the operation. Recovery in this instance was rapid. Childhood and infancy, Rein remarks, are favorable to laparotomy. Fenomenoff has successfully performed abdominal section on a newborn child.

—Brit. Med. Jour.

DIGITAL EXPLORATION IN MIDWIFERY.

Crouzat (Rev. Obstet. Internat., October 21, 1895) does not agree with certain German obstetricians who would discard digital exploration in normal labor, relying on abdominal palpation. The diagnosis of normality may demand the introduction of the finger into the vagina. Crouzat's principles simplify digital exploration and guard its dangers. Vaginal examination, he thinks, should be made as seldom as possible. One exploration at the beginning of labor and another immediately after the rupture of the membranes are usually sufficient. His practice is to make the external parts antiseptic; then the hands and forearms are washed and brushed thoroughly. The nails must be specially attended to. The washing is afterwards repeated in a 1 in 1000 solution of sublimate. Great care in the introduction of the forefinger is strongly advocated. It should be dipped in sublimated vaseline and guarded by the thumb and the other fingers whilst the hand is passed under the clothes and near the patient's thighs. On reaching the perineum the labia are parted by the thumb and middle finger. The forefinger is lastly introduced into the vagina without having touched any part of the patient or her clothes since the instant it was made antiseptic.

—Brit. Med. Jour.

EDEMA AND PROLAPSE OF CERVIX IN PREGNANCY AND LABOR.

Swift (Australasian Med. Gaz. September 20, 1895), in reference to Geyl's recent memoir (Epitome, July 20, No. 55), believes that Geyl is in error in asserting that the above condition is so very rare. More probably many cases have not been reported. Swift has seen three cases during the last four years. The first was in the third month of pregnancy; there was much bearing down. An edematous cervix protruded from the vulva. It was easily replaced and the patient was kept at rest. A three months' fetus came away on the night after reduction of the cervix. On the same evening Swift was called to another and similar case. The patient was five months pregnant, and thought that the womb had fallen. The cervix was extremely elongated and edematous, protruding through the vulva. It was reduced without difficulty; the patient remained in bed for two days. She was delivered easily at term. The third case was six months pregnant. The womb was said to be down, and there was troublesome smarting. Swift found the cervix outside the vulva very edematous and excoriated in several places from chafing. Reduction and pessaries proved of no permanent benefit. A T-bandage and a pad were applied and the patient kept at rest till term. The os dilated easily, and labor was in no way impeded.

—Brit. Med. Jour.

DERMOID OVARIAN CYST OF UNUSUAL SIZE.

Ullman (Wiener Med. Presse, September 22, 1895) states that a married woman, aged 53, recently came under Professor Hofmokl's care for a large ovarian tumor. She said that it had only been growing for a year. The abdominal swelling was marked, the skin shiny, the subcutaneous veins dilated. The uterus was drawn up high, and measured 2 1-2 inches. Part of the tumor lay in Douglas' pouch. When the cyst was exposed and tapped, 13 1-2 pints of a greasy fluid escaped. Great care was taken to keep the fluid from escaping into the peritoneum. There was a soft parietal adhesion, easily separated. The pedicle was very broad. Three interlocking ligatures were applied, and it was divided by a thermocautery. A drainage tube was applied, and left in for five days. The patient made a very good recovery. The tumor weighed over 35 pounds. It consisted chiefly of one large cavity, which had contained the greasy fluid, and still held masses of fat and hair. The remainder of the tumor, as is usual in dermoids developing late in life, was multilocular and glandular as in the commoner form of cyst.

—Brit. Med. Jour.

Therapeutical Progress.

BRIEF NOTES ON NEW AND RARE REMEDIES.

From the American Druggist.

ASEPIN. (Brom-Acetanilid.) Colorless prisms insoluble in W. Anodyne, analgesic. Dose: 1 1-2 grs. See Antisepsin.

ASEPTOL. (Soziolic, Sulphobenzoic or Orthophenol-Sulphonic Acid.) Pure; small deliquescent scales forming a pinkish liquid. Very soluble in A., water. In commerce as 33 1-3 per cent. solution. Uses same as carbolic acid, but less poisonous internally, and less irritating externally.

ASPARAGIN. From asparagus officinalis. Beautiful, colorless, odorless crystals, soluble in hot water, acids and alkalies, less so in cold. Insoluble in A. E. Diuretic. Dose: 1-2 to 2 grs. daily.

ASPIDOSPERMINE. Commercial mixture of Quebracho alkaloids. Grayish yellow powder, slightly soluble in water. Yields soluble salts with acids. Tonic, febrifuge, respiratory stimulants (asthma, etc.) Dose: Commercial article 3-4 to 1 1-2 grs. daily. True alkaloid 1-4 to 1-2.

ATHEROSPERMA MOSCHATA (Australian Sassafras.) The bark is employed as a tea in Australia.

BAPTISIN. Glucoside from Baptisia tinctoria. Yellow resinous powder of strong odor. Purgative, in large doses emeto-cathartic. Dose: 1 1-2 to 4 1-2 grs.

BEBEERINE-ALKALOID. (Beberine, Bibrine Buxine.) FromNectandra Rodiaei. Yellowish brown bitter powder. Soluble in A.,E. Insoluble in cold water. Tonic. Febrifuge. (Periodic migraine, neuralgia, etc.) Dose: 1 to 10 grs. Not to be confounded with Berberine.

HENZACETIN. Acetamido-Methyl-Salicylic Acid.) White crystals, Soluble in A., slightly in water. Forms salts with bases. Prompt antineuralgic.

BENZANILID.(Phenyl-Benz-Amide.) Pinkish white crystalline powder. Insoluble in water, soluble in 58 A. Mild antpyetic. Dose: 1 to 10 grs. Maximum daily dose 48 grs.

BENZONAPHTHOL. (Beta-Naphthol Benzoate.) Analogous to betol.White crystalline powder or long needles; slightly aromatic in odor, soluble in E., C. hot A. Almost insoluble in cold A. Insoluble in water. Intestinal antiseptic, diuretic. Dose: 50 to 75 grs. daily in small divided doses on powder or emulsion.

BENZO-PHENONEID. Non-irritant germicide similar to pyoctanin. Corneal ulcers, purulent keratitis, etc. Soluble in 100 water.

BENZOSOL. (Benzoyl-Guaiacol, Guaiacol Benzoate.) White aromatic powder, soluble in C., E., hot A. Almost insoluble in water. Antiseptic (Pulmonary tuberculosis.) Dose: 4 grs. 3 times daily, gradually increased up to 12.

BENZOYLEUGENOL. Neutral, acidular, colorless, odorless, slighly bitter crystals. Insoluble in water, freely soluble in A., E. Anti-tubercular.

BENZOYLTROPEINE. Silky needles forming soluble salts. Local anesthetic.

BETOL. (Beta-Naphthol, Salicylate, Naphthalol, Naphtho-Salol.) White crystalline, insipid powder, almost odorless, soluble in

E. C., less so in A., insoluble in water or glycerine. Intestinal antiseptic, catarrh, etc. Like salol. Dose: 4 to 8 grs. 3 or 4 times daily.

BISMUTH, BETA-NAPHTHOLATE. Brown odorless, neutral, insoluble powder, containing 23 per cent. beta-naphthol. Intestinal antiseptic, like betol, salol, etc. Dose 15 to 30 grs.

B. SALICYLATE: Basic, 64 per cent. (Generally termed bismuth salicylate.) Whitish, odorless, tasteless, crystalline powder. Soluble in acids and alkalis, with decomposition. Insoluble in water, A. E. Antiseptic disinfectant. (Diarrhea of phthisis, typhoid fever, enteritis, etc.) Dose: 4 to 6 grs. (children 1-2 to 1 gr.) every 2 hours.

B. SUB-GALLATE. (Basic-Bismuth Gallate. See Dermatol.)

B. SUB-IODIDE (Oxy-iodide.) Brownish-red amorphous, inodorous, insoluble powder. Antiseptic. Applied pure, like iodoform (Gonorrhea 1 per cent. mixture). Dose: Internally 4 to 9 grs. daily. (Gastric ulcers, typhoid fever, etc.)

B. TRIBROMPHENOL. Yellow, odorless, tasteless, insoluble powder. Internal antiseptic (Cholera, etc.) Doses: 75 to 100 grs daily.

BISMUTHOL. (Bismuth-Sodium-Phosphosalicylate.) White, crystalline, odorless powder of rather agreeable taste. Soluble in W. Antiseptic, antipyretic, 20 per cent. dusting powder, or 1 to 10 per cent. solution topically.

BLANCOLINE. A perfectly white, odorless and neutral petroleum jelly, corresponding to the G. P. and U. S. P. ointment base (solid) and oil (liquid).

BOLDINE. Alkaloid. From Boldoa Chiliensis. White, turning dark on exposure. Soluble in A. E., C. and in caustic alkalis. Hepatic tonic and hypnotic (Biliary calculi, and disease of liver and bladder). Dose: 3 grs. daily in capsules or in 5 per cent. enema.

BORAL. (Aluminum Borotartrate.) Colorless, sweetish, astringent crystals, freely soluble in W. Powerful, harmless disinfectant. Topically in powder or in diluted glycerin solution in inflammations of throat and nose.

BROMAL. Analogue of chloral. Oily liquid, of peculiar penetrating odor and sharp burning taste. On exposure absorbs moisture and is converted into the crystalline hydrate. Not to be confounded with Bromol, see below.

BROMALIN. (Brom-Methyl-Form, Hexamethylene. Tetramintromethylate.) Colorless scales or crystalline powder easily soluble in W. Almost tasteless sedative; substitute for bromides. Dose: 30 to 60 grs.

BROMAMIDE. (Mono-Brom-Phenyl-Acetamide.) Crystals, soluble in C. E., oils, boiling A. Insoluble in water. Contains 75 per cent. bromine. Antipyretic, analgesic, antirheumatic. Dose 10 to 15 grs.

BROMETHYLFORMINE.—A derivative of formal sedative, anti-epileptic. Dose 30 to 60 grs.

BROMOL. (Tribromphenol).—White crystalline powder, or soft white crystals, soluble in A., E., C., oils, less so in glycerin; almost insoluble in water. Disinfectant, surgical and intestinal. (Wounds, diarrhea, typhoid fever, etc.) Externally in two to three per cent., oily solution, in talcum, or in 4 per cent. glycerin solution (diphtheria). Internally 1 1-2 grs. four or five times daily. Not to be confounded with bromal, which see above.

BUTYL-CHLORAL-HYDRATE. (Croton-chloral). — Colorless crystals, resembling chloral in odor, very soluble in A., less so in dilute A. Anodyne anesthetic (neuralgia of the fifth pair, facial neuralgia of anemic persons), soporific doses 10 to 15 grs.

(To Be Continued.)

Miscellany.

THE NEW ORLEANS MARDI GRAS.

This famous festival of King Carnival, at New Orleans, will be held February 18. As one of the most valuable restoratives is mirthful recreation, no more pleasurable trip could be made than this, which could be continued to Mexico or California, by that peerless "Sunset Limited" train over the Southern Pacific route. Read the full page announcement of this festival and this train in our advertising columns.

WORLD'S CONGRESS OF MEDICO-CLIMATOLOGY.

A national meeting of the Congress will be held in San Antonio, Texas, beginning February 20, 1896, and continuing for three days. Papers will be read by many of those in attendance, and the proceedings of the congress will be very interesting and instructive. All physicians in good standing are invited to attend. Membership fee is only $5 for five years, payable in advance. Printed copy of constitution and by-laws will be sent upon application, with other matter relating to the congress.

Nearly seven hundred representatives have been appointed by the various State societies to date.

All members have equal rights and privileges.

A FEW REASONS FOR JOINING THE CONGRESS.

1. To acquaint you with facts in climatology as relating to the etiology of diseases and as a therapeutical agent.

2. Enabling you to apply this knowledge so as to give your patients the benefit of it.

3. To set forth the advantages of your own section or State as regards its climatic advantages.

4. To enable you to become acquainted with your brother practitioners in other sections of the country, and exchange views with them.

5. To afford you the opportunity to investigate climates and health resorts for yourself, when attending the annual meetings, which will be held in various seasons of the year in different sections of the United States, and at the same time enable you to see the country.

So that you may at least once a year take a much needed vacation.

For Pruritus and Ciliary Blepharitis:

R Neutral acetate of lead ..... 0.10 gm
Hydrochlorate of cocaine ..... 0.15 gm
White vaseline... 3.00 gm
M. Sig: External use.
—Semaine Medicale.

Tooth powder:

R Precipitated chalk. 60.00 gm
Pulverized camphor ..... 10.00 gm
Saccharine ..... 1.00 gm
M.
—Therapeutische Wochensch.

THE ALBERTO-LEVI PRIZE

We read in the Progres Medical, of December 28, 1895, that in public seance of December 23, the French Academie des Sciences awarded the Alberto-Levi prize of 50,000 francs to Prof. Behring, of Marburg (Hesse-Nassau), the discoverer of the antidiphtheria serum, and to Dr. Roux, who introduced it into France. The remarkable thing about this is that a foreigner, and a "Prussian" especially, should receive the second largest prize that it is in the power of the French Academie des Sciences to award.

The "Prix Brebant" of 100,000 francs was not given this year.

For Physicians' Wives

FRUIT AS MEDICINE.

Why for ages have people eaten apple sauce with their roast goose and sucking pig? Simply because the acids and peptones in the fruit assist in digesting the fats so abundant in this kind of food. For the same reason at the end of a heavy dinner we eat our cooked fruits, and when we want their digestive action even more developed we take them after dinner in their natural uncooked state as dessert. In the past ages instinct has taught men to do this; to-day science tells them why they did it, and this same science tells us that fruit should be eaten as an aid to digestion of other foods much more than it is now. Cultivated fruits, such as apples, pears, cherries, strawberries, grapes, etc., contain on analysis very similar proportions of the same ingredients, which are about 1 per cent. of malic and other acids, and 1 per cent of flesh-forming albuminoids, with over 80 per cent. of water.

Digestion depends upon the action of pepsin in the stomach upon the food, which is greatly aided by the acids of the stomach. Fats are digested by these acids and the bile from the liver. Now, the acids and peptones in fruit peculiarly assist the acids of the stomach. Only lately even royalty has been taking lemon juice in tea instead of sugar, and lemon juice has been prescribed largely by physicians to help weak digestion, simply because these acids exist abundantly in the lemon.—Popular Science Monthly.

SOME OPTIMISTIC PHILOSOPHY

Despondency is a violation of nature's law; her scheme is to grow; we are put here that we may unfold, and help others to unfold, and optimism, cheerfulness, is the plant that would gladly grow upward, while pessimism, despair, is the gravitation that ever strives to drag it back.

If one would try to cultivate a liking for self-evident duties, that effort, too, would bring content, since real happiness is only the spark struck off from duty in performance.

A conducer of contempt is to find out what one is really good for (not what one would like to do, but what one really can do—they are quite different things), for everyone has a mission, be it ever so little a one, and then proceed to work on that line. The results accomplished in that way will impart a consciousness of being a success, and to be successful is to be happy.

The cure for despondency is first, activity; second, activity, and third and lastly and forevermore activity, and activity, moreover, in a form that will benefit the spiritual, mental and material natures of others as well as of ourselves. Our prayer should ever be for unflagging industry to express the very best that is in us, and ability to elicit it from others as well.

We alone divide up the time, and hence trammel ourselves. Time, in reality, is limitless and indivisible. We are in eternity now as much as we ever will be, since time is but a part of eternity. Do not the wise ones even say that death itself is but a lesser-known phase of life? Hence if our past has dissatisfied us, there is always a to-morrow, with its endless beauties and possibilities, in which we may begin anew our work of reformation.

As a general thing it is the lazy people who are the despondent people. If one is occupied one doesn't

have time to be melancholy. I sometimes think, indeed, that indolence is the arch sin. At any rate, nothing is truer than that Satan finds some mischief still for idle hands to do, and being dreary-minded is undeniably one of the most mischievous of all mischiefs, since it reacts not only on the culprit, but on everybody around him. Whoever, indeed, comes within his shadow is darkened.

—Jenness Miller Monthly.

THE CHEMICAL AND PHYSIOLOGICAL CHANGES IN MILK CAUSED BY BOILING.

In the British Medical Journal for December 14, Dr. J. L. Kerr states that there is reason for supposing that when fresh milk is ingested the living cells are at once absorbed without any process of digestion, and enter the blood stream and are utilized in building up the tissues. The casein of the milk is digested in the usual way of other albuminoids by the gastric juice, and absorbed as peptone. There is also absorption of serum albumin by osmosis.

The chemical result of boiling milk is to kill all the living cells, and to coagulate all the albuminoid constituents. Milk after boiling is thicker than it was before.

The physiological results are that all the constituents of the milk must be digested before it can be absorbed into the system; therefore there is a distinct loss of utility in the milk, because the living cells of fresh milk do not enter into the circulation direct as living protoplasm, and build up the tissues direct, as they would do in fresh unboiled milk.

In practice, he says, it will have been noticed by most medical practitioners that there is a very distinctly appreciable lowered vitality in infants which are fed on boiled milk. The process of absorption is more delayed, and the quantity of milk required is distinctly larger for the same amount of growth and nourishment of the child than is the case when fresh milk is used.

A THINNING-DOWN PROCESS.

Banting, the artificial thinning-down process, is just now a craze in London, says an exchange. It is said that both men and women devote much time and anxious thought to the subject, and those physicians who make a specialty of reducing weight have reaped a harvest of profit. According to a correspondent, of the various systems in vogue the most efficacious seems to be that pursued and recommended by the fish regimen. The patient lives entirely on various kinds of fish, a small slice of wholemeal bread being permitted with each meal. British specialists deny to their patients any food containing either sugar or starch. Anti-fat dishes have largely entered into the menu of all well-ordered establishments, and toast has taken the place of bread. It is said that Dr. Zwiningen, Bismarck's physician, simply orders his patients to entirely forego any kind of liquid with their meals. By this means he claims to make the stoutest men become normal in size.—Philosophical Journal.

THE RETORT PERTINENT.

A young physician, who has just established himself, and with very little practice, is noted for his braggadocio. One of the older physicians, meeting him on the street the other day, asked how he was coming on. "I have got more than I can attend to," was the boastful reply; "I had to get out of my bed five times last night."

"Then why don't you buy some insect powder?"—Omaha Clinic.